

THE BOY'S OWN PAPER

Quicquid agunt pueri nostri farrago libelli.

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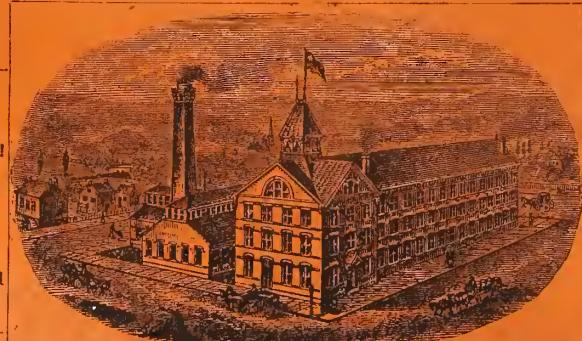
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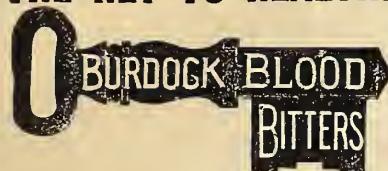
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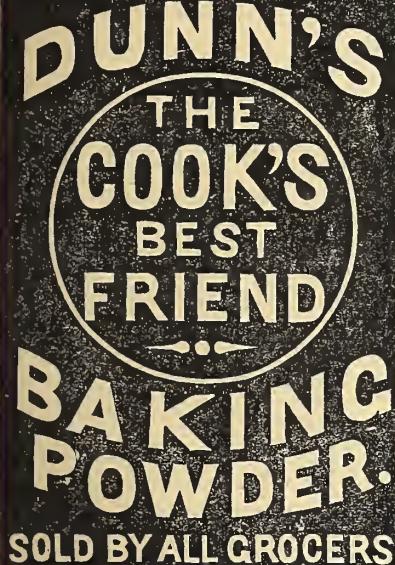
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THE BOY'S OWN PAPER

Vol. IV.—No. 164.

SATURDAY, MARCH 4, 1882.

Price One Penny.
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WILD ADVENTURES ROUND THE POLE

BY GORDON STABLES, M.D., R.N.

CHAPTER XXIII.—RORY'S REVERIE—SILAS ON THE SCYMNUS BOREALIS—THE BATTLE WITH THE SHARKS—RORY GETS IN FOR IT AGAIN—THROWN AMONG THE SHARKS.

THE ships still lay hard and fast in the ice-pack, many miles to the nor'ard and eastward of the Isle of Jan Mayen. There was as yet no sign of the frost giving way. Day after day the bay ice between the bergs got thicker and thicker, and the thermometer still stood steadily well down below zero. But the wind never blew, and there never was a speck of cloud in the brilliant sapphire sky, nor



A Battle with the Sharks.

even haze itself to shear the sun of his beams; so the cold was hardly felt, and after a brisk walk or scamper over the ice our heroes felt so warm that they were in the habit of throwing themselves down on the snow on the southern side of a hummock of ice. Book in hand, Rory would sometimes lie thus for fully half an hour on a stretch. Not always reading, though; the fact of Rory's having a book in his hand was no proof that he was reading, for just as often he was dreaming; and I'll tell you a little secret—there were a pair of beautiful eyes which were filled with tears when last he had seen them, there were two rosy lips that had quivered as they parted to breathe the word "good-bye." These, and a soft small hand that had lain for a moment in his, haunted him by night and by day, and seemed ever present with him through all his wild adventures.

Ah! but they didn't make him unhappy, though; no, but quite the reverse.

He was reclining thus one day all by himself, about a quarter of a mile from his ship, when Ralph and McBain came gently up behind him, walking as silently as the crisp snow, that felt like powdered glass under their feet, would permit them.

"Hullo! Rory," cried McBain, in a voice of thunder.

Startled from his reverie, Rory sprang to his feet, and instinctively grasped his rifle.

His friends laughed at him.

"It is somewhat late to seize your rifle now, my boy," said McBain; "supposing now we'd been a bear, why we would be eating you at this present moment."

"Or making a mouse of you," added Ralph, "as the yellow bear did of poor Freezing Powders; and at this very minute you'd be

'Dancin' for de dear life
Among de Greenland snow.'

"I was reading," said Rory, smiling, "that beautiful poem of Wordsworth, 'We are Seven.'"

"Wordsworth's 'We are Seven'?" cried Ralph, laughing. "Oh! Row, Row, you'll be the death of me some day! Since when did you learn to read with your book upside down?"

"Had I, now?" said Rory, with an amused look of candour. "In troth I dare say you are right."

"But come on, Row, boy," continued Ralph, "luncheon is all ready, Peter is waiting, and after lunch Silas Grig is going to show us some fun."

"What, more malley-shooting?" asked Rory.

"No, Row, boy," was the reply; "he is going to lead us forth to battle against the sharks."

"Against the sharks!" exclaimed Rory, incredulous.

"I'm not in fun, really," replied Ralph. "Silas tells us they are in shoals of thousands at present under us; that the sea swarms with them, some fifteen feet long, others nearer twenty."

"Oh!" said Row; "this is interesting. Come on; I'm ready."

While the trio stroll leisurely shipwards over the snow, let me try to explain to my reader what Rory meant by malley-shooting, as taught them by Silas Grig. The term, or name, "malley," is that which is given by Greenlanders to the Arctic gull. Although not so charming in plumage as the snowbird, it is nevertheless a very handsome bird, and has many queer ways of its own which are interesting to

the naturalist, and which you do not find described in books. These gulls build their nests early in the season on the cliffs of Faroe and Shetland, and probably, though I have never found them, in sheltered caves of Jan Mayen and Western Greenland as well. Despite the extreme cold, they manage to bring forth and rear their young successfully, and are always ready to follow Greenland ships in immense flocks. Wherever work is going on, wherever the crack of the rifle is heard on the pack, wherever the snow is stained crimson and yellow with blood, the malleys will be there in daring thousands. The most curious part of the thing is this: they possess a power of either scent or sight, which enables them to discover their quarry, although scores of miles away from it. For example—the Arctic gulls, as a rule, do not follow a ship for sake of the bits of bread and fat that may be thrown overboard. Some of them do, I know, but I look upon these as merely the lazaroni, the beggars of their tribe; your healthy, youthful, aristocratic malley prefers something he considers better. Give him blubber to eat, or the flesh of a new-slain seal, and he will follow you far enough. Now a ship may be lying becalmed off this pack, with no seals in sight, and doing nothing; if so she will be deserted by these birds. Not from the crow's-nest, though aided by the most powerful telescope, will you be able to deserv a single gull; but no sooner are a sealskin or two hauled on deck to be cleared of their fat, than notice seems to be flashed to the far-off gulls, and in a few minutes they are winging around you, making the welkin ring with their wild delighted screams. They alight in the water around a morsel of meat in such bunches, that a table-cloth would cover two dozen of them.

Having had enough—and that "enough" means something enormous—they go off for a "fly," just as tumbling pigeons do. You may see them in hundreds high in air, sailing round and round, enjoying themselves apparently to the very utmost, and shrieking with joy. Now is the time for the skua to attack them. A bold, black, hawk-like rascal is this skua, a robber and a thief. He never comes within gunshot of a ship. He is as wild and untamable as the north wind itself; yet, no sooner have the malleys commenced their post-prandial gambols than he is in the midst of them. He does not want to kill them; only some one or more must disgorge their food. On this the skua lives. No wonder that Greenland sailors call him the unclean bird.

The malley-gull floats on the waves as lightly and gently as a child's toy air-ball would. His usual diet is fish, except in sealing times, and of the fish he catches the marauding skua never fails to get his share. It is for the sake of the feathers sailors shoot these birds on the ice, for they are nearly as well feathered as an eider duck.

Getting tired of shooting seals in the water, Rory and Allan one day, leaving the others on the banks of the great ice-hole, determined to make a bag of feathers. And here is how they bagged their game.

Armed with fowling-pieces, they retired to some distance from the water party and lay down behind a hummock of ice. Here they might have lain until this day without a bird looking twice in their direction had they not provided themselves with a lure. This lure was simply a pair of the wings of a gull, which one waved above his head, while the other prepared to fire

right and left. And not a minute would these wings be waved aloft ere the gulls, with that strange curiosity inherent in all wild creatures, would begin to circle around, coming nearer and nearer, tack and half-tack, until they were within reach of the guns, when—down they came. But the untimely end of one brace nor twenty did not prevent their companions from trying to solve the mystery of the waving wings.

Luncheon was on the table, and our friends were seated around it, all looking happy and hungry. Rory would have liked to have asked Silas Grig right straight away about the expedition against the sharks but for one thing—he didn't like to appear too inquisitive; and, for another, he was not quite sure even now that it was not one of Ralph's pretty jokes. But when everybody had been served, when weather and future prospects, the state of the thermometer and height of the barometer, had been discussed, Rory found he could not contain himself any longer.

"What are you going to be doing after lunch?" he asked Silas, pointedly.

"Aha, boy Rory!" was the reply; "we'll have such sport as you never saw the likes o' before!"

Rory now began to see there really was no joke about the matter, and Ralph, who was sitting next to him, pinched him for his doubt and misbelief. The two young men could read each other's thoughts like books.

"Do you mean to say you are going to catch sharks in earnest, you know?" asked Rory.

"Well," said Silas, with a bit of a laugh, "I'm going to have as good a try at it as ever I had. And as for catching 'em in earnest, I'm thinking it won't be fun—for the sharks!"

"It is the *Scymnus borealis*, isn't it?" said Dr. Sandy McFlail, "belongin', if my memory serves me, to the natural family *Qualidae*—a powerful brute, and a vera dangerous too."

"You may call him the *Aurora borealis* if you like, doctor," said Silas; "and as for his family connections I know nought, but I dare say he comes from a jolly bad stock."

"Natural history books," said Allan, "don't speak of their being so very numerous."

"Natural history books!" reiterated Silas, with some warmth of disdain. "What do they know? what can they teach a man? Write a complete history of all the creatures that move about on God's fair earth, that fly in His air or swim in His sea, and you'd fill St. Paul's with books from top to bottom—from the mighty cellars beneath to the golden cross itself. No, take my advice, boy Rory; if you want to study nature put little faith in books. The classification is handy, say you? Yes, doctoer; and I've seen a stripling fresh from college look as proud as a two-year-old peacock because he could spin you off the Greek names of a few specimens in the British Museum, though he couldn't have told you the ways and habits of any one of them to save him from having his leave stopped. There is only one way, gentlemen, to study natural history: you must go to the great book of Nature itself—ay, and be content and thankful, too, if, during even a long lifetime, you are able to learn the contents of even a single page of it."

Rory, and the doctor too, looked at Silas with a kind of newborn admiration; there was more in this man, with his weather-

beaten, flower-pot-coloured face, than they had had any idea of.

"If I had time, gentlemen," Silas added, "I could tell you some queer stories about sharks. 'I reckon,' as poor old Cobb used to say, that some o' them would raise your hair a bit, too!"

"And what kind of a monster is this Greenland shark?" asked Allan.

"No more a monster," said Silas, "than I am. God made us both, and we have each some end to fulfil in life. But if you want me to tell you something about him, I'll confess to you I love the animal about as much as I do an alligator. He comes prowling around the icebergs when we are sealing to see what he can pick up in the shape of a dead or wounded seal, a chunk o' blubber, or a man's leg. He is neither dainty nor particular, he has the appetite of a healthy ostrich, and about as much conscience as a coal-carter's horse. He is as wary as a five-season fox, and when he pays your ship a visit when out at sea, he looks as humble and unsophisticated as a bull trout. He'll take whatever you like to throw him, though—anything, in fact, from a cow's heel to the cabin-boy—and he'll swallow a red-hot brick rather than go away with an empty stomach. But when he comes around the ice at old-sealing time he doesn't come alone, he brings his father and mother with him, and his uncles and aunts, and apparently all his natural family, as the doctor calls it. And fine fun they have, though they don't agree particularly well even *en famille*. I've seen five of them on to one seal crang, and there was little interchange of courtesies, I can tell you. He's not a brave fish, the Greenland shark, big and all as he is. If you fall into the water among a score of them your best plan is to keep cool and kick. Yes, gentlemen, by keeping cool and kicking plenty I've known more than one man escape without a bite. The getting out is the worst, though; for as long as you splash they keep at a distance and look on; they don't quite know what to make of you; but as soon as you get a hold of the end of the rope, and are being drawn out, look sharp, that's all, or it will be 'Snap!' and you will be minus one leg before you can wink, and thankful you may be it isn't two. A mighty tough skin has the Greenland shark," continued Silas; "I've played upon the back of one for over half an hour with a Colt's revolver, and it just seemed to tickle him, nothing more. I don't think sharks have much natural affection, and they are no respecters of

persons. I do believe they would just as soon dine off little Freezing Powders here as they would off a leg of McBain."

"Oh, oh, Massa Silas!" cried Freezing Powders, "don't talk like dat; you makes my flesh all creep like nuffin at all!"

"They are slow in their movements, aren't they?" said the doctor.

"Ay!" said Silas, "when they get everything their own way; but they are fierce, revengeful, and terrible in their wrath. An angry shark will bite a bit out of your boat, collar an oar, or do anything to spite you, though it generally ends in his having his own head split in the long run."

"The men are all ready, sir," said Stevenson, entering the cabin at that moment, "to go over the side, sir."

"Thank you," said the captain; "send them on to the ice, then, for a general sky-lark till we come up."

When the officers did come up they found all the men on the ice, and a pretty row they were having. They were running, racing, jumping high leap and low leap, boxing, and fencing with single-sticks, quarter-staves, and foils; and last but not least, a party were dancing the wild and exciting reels of Scotland, with Peter playing to them just as loudly as he knew how to, although his eyes seemed starting from his head, and his face was as red as a dorking's comb in laying season.

Then it was "Hurrah for the ice-hole!" and "Hurrah for the sharks!"

Silas did not take very long to get his party—his fishing-party, as he called it—into working order. He evidently meant business, and expected it, too. He had seven or eight long lines, to each of which was attached a piece of chain and an immense shark-hook. These were baited with pieces of blubber; the men were armed with long knives and clubs. So sure was Silas Grig of capturing a big haul of these sea-fiends, the Greenland sharks, that he had a large fire of wood lighted on the ice at some little distance, and over it, suspended by a kind of shears, hung an immense cauldron. In this it was intended to boil the livers of the sharks in order to extract the oil, which is the most valuable part of the animal.

Until tempted by huge pieces of seal-flesh hardly a shark showed fin; but when once their appetites were whetted then—!

* Silas Grig's description of the Greenland shark is a pretty correct one, so far as my own experience goes.—G. S.

I cannot, nor will I attempt to describe, this battle with the sharks, although such a fight I have been eye-witness to. Sometimes as many as two were hauled out at once; it required the united strength of fifteen or twenty men to land them. Then came the struggle on the ice, the clubbing, the axing, and the death, during which many a man bit the snow, though none were grievously wounded. Before the sun pointed to midnight, between thirty and forty immense sharks had been captured, and the oil from their livers weighed nearly a ton.

Poor Rory—to whom all the best of the fun and all the worst misfortunes seemed always to fall—had a terrible adventure during the battle. Carried away by his enthusiasm, with club in hand, he was engaging one of the largest sharks landed. The brute bent himself suddenly, then as suddenly straightened himself out, and away went boy Rory, like an arrow from a cross-bow, alighting in the very centre of the pool. For a moment every one was struck dumb with horror!

But Rory himself never lost his presence of mind. He remembered what Silas had said about splashing and kicking to keep the sharks at bay. Splash? I should think he did splash, and kick too; indeed, kicking is hardly any name for his antics. He made a wheel of himself in the water. He seemed all arms and legs, and as for his head, it was just as often up as down, and *vice versa*; and all the while he was issuing orders to those on the bank—a word or two at a time, whenever his head happened to be uppermost, so that in the midst of the splashing and spluttering his speech ran like this:

"Stand by"—(splutter, splutter)—"you fellows"—(splash, splash)—"up there"—(splutter)—"to pull quick"—(splash)—"as soon as I"—(splutter, splutter)—"catch the rope."—(splash, splash)—"Now lads, now!"—(splutter, splutter, splash, splash, splutter, splutter, splash).

"Hurrah!" he cried, when he found himself on the ice. "Hurrah! boys. Cheer, boys, cheer. Safe to bank; hurrah! and both my legs as sound as a bell, and never a toe missing from any single one of the two o' them. Hurrah! Sure it's myself I'll be Queen o' the May to-morrow. Hurrah!"

Yes, reader, the very next day was May-day, and on that day there are such doings on Greenland ships as you never see in England.

(To be continued.)

THE CRYPTOGRAM.

(A SEQUEL TO "THE GIANT RAFT.")

BY JULES VERNE, AUTHOR OF "THE BOY CAPTAIN," ETC., ETC.

CHAPTER XX.—THE LOWER AMAZON.

LITTLE remains to tell of the second part of the voyage down the mighty river. It was but a series of days of joy. Joan Dacosta returned to a new life, which shed its happiness on all who belonged to him.

The giant raft glided along with greater rapidity on the waters now swollen by the floods. On the left they passed the small village of Don Jose de Maturi, and on the right the mouth of that Madeira which owes its name to the floating masses of vegetable remains and trunks denuded of their foliage which it bears from the depths

of Bolivia. They passed the archipelago of Caniny, whose islets are veritable boxes of palms, and before the village of Scipa, which, successively transported from one bank to the other, has definitely settled on the left of the river, with its little houses, whose thresholds stand in the yellow carpet of the beach.

The village of Silves, built on the left of the Amazon, and the town of Villa Bella, which is the principal guarana market in the whole province, were soon left behind by the giant raft. And so was the village of Faro and its celebrated river of the

Nhamundas, on which, in 1539, Orellana asserted he was attacked by female warriors, who have never been seen again since, and thus gave us the legend which justifies the immortal name of the river of the Amazons.

Here it is that the province of Rio Negro terminates. The jurisdiction of Para then commences; and on the 22nd of September the family, marvelling much at a valley which has no equal in the world, entered that portion of the Brazilian empire which has no boundary to the east except the Atlantic.

"How magnificent!" remarked Minha, over and over again.

"How long!" murmured Manoel.

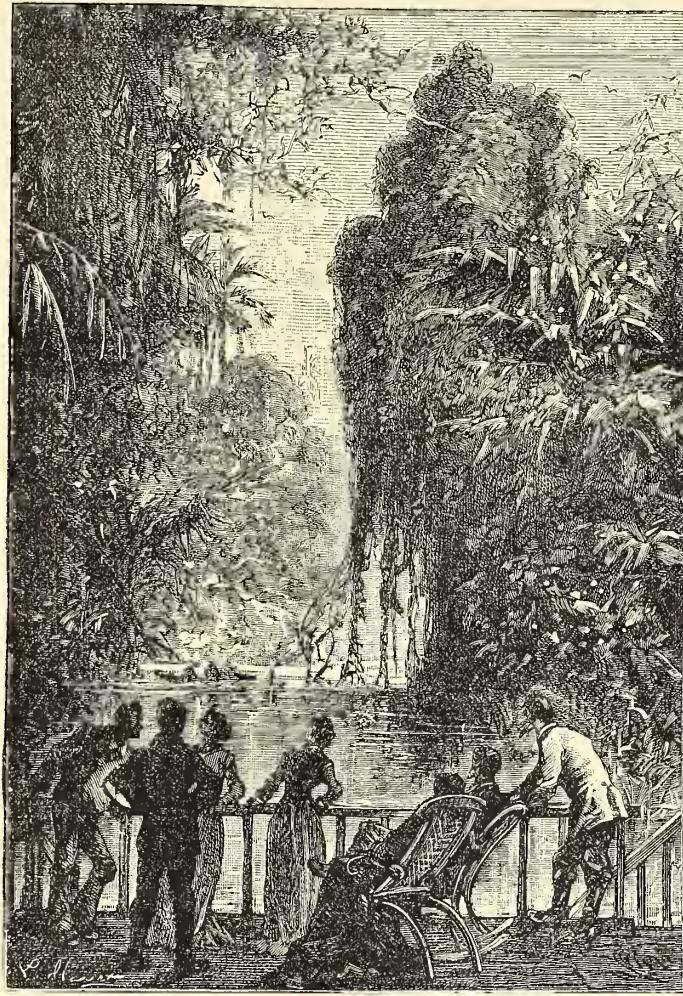
"How beautiful!" repeated Lina.

"When shall we get there?" murmured Fragoso.

And this was what might have been ex-

the Amazon. Day and night it moved along under the vigilant care of its trusty pilot; no more stoppages either for the gratification of the passengers or for business purposes. Unceasingly it progressed, and the end rapidly grew nearer.

On leaving Alemquer, situated on the



Through magnificent Forests.

pected of these folks from their different points of view, though time passed pleasantly enough with them all the same. Benito, who was neither patient nor impatient, had recovered all his former good-humour.

Soon the jangada glided between interminable plantations of cocoa-trees, with their sombre green flanked by the yellow thatch or ruddy tiles of the roofs of the huts of the settlers on both banks, from Obidos up to the town of Monte Alegre.

Then there opened out the mouth of the Rio Trombetas, bathing with its black waters the houses of Obidos, quite a small town, and even a "citade" with large streets bordered with handsome habitations, and a great centre for cocoa produce, situated at about one hundred and eighty miles from Belém. Then they saw another tributary, the Tapajoz, with its greenish-grey waters descending from the southwest; and then Santarem, a wealthy town of not less than five thousand inhabitants, Indians for the most part, whose nearest houses were built on the vast beach of white sand.

After its departure from Manaos the jangada did not stop anywhere as it passed down the much less encumbered course of

left bank, a new horizon appeared in view. In place of the curtain of forests which had shut them in up to then, our friends beheld a foreground of hills, whose undulations could be easily descried, and beyond them the faint summits of veritable mountains vandyked across the distant depth of sky. Neither Yaquita, nor her daughter, nor Lina, nor old Cyble, had ever seen anything like this.

But in this jurisdiction of Para Manoel was at home, and he could tell them the names of the double chain which gradually narrowed the valley of the huge river.

"To the right," said he, "that is the Sierra de Paruacarta, which curves in a half-circle to the south. To the left, that is the Sierra de Curuva, of which we have already passed the first outposts."

"Then they close in?" asked Fragoso.

"They close in," replied Manoel.

And the two young men seemed to understand each other, for the same slight but significant nodding of the head accompanied the question and reply.

At last, notwithstanding the tide, which since leaving Obidos had begun to be felt, and which somewhat checked the progress of the raft, the town of Monte Alegre was

passed, then that of Praynha de Onteiro, then the mouth of the Xingu, frequented by Yurumas Indians, whose principal industry consists in preparing their enemies' heads for natural history cabinets.

To what a superb size the Amazon had now developed, as already this monarch of rivers gave signs of opening out like a sea! Plants from eight to ten feet high clustered along the beach, and bordered it with a forest of reeds. Porto de Mos, Boa Vista, and Gurupa, whose prosperity is on the decline, were soon among the places left in the rear.

Then the river divided into two important branches, which flowed off towards the Atlantic, one going away north-eastwards, the other eastwards, and between them appeared the beginning of the large island of Marajo. This island is quite a province in itself. It measures no less than a hundred and eighty leagues in circumference. Cut up by marshes and rivers, all savannah to the east, all forest to the west, it offers most excellent advantages for the raising of cattle, which can here be seen in their thousands. This immense barricade of Marajo is the natural obstacle which has compelled the Amazon to divide before precipitating its torrents of water into the sea. Following the upper branch, the jangada, after passing the islands of Caviana and Mexiana, would have found an embouchure of some fifty leagues across, but it would also have met with the bar of the prororoa, that terrible eddy which, for the three days preceding the new or full moon, takes but two minutes instead of six hours to raise the river from twelve to fifteen feet above ordinary high-water mark.

This is by far the most formidable of tide-races. Most fortunately the lower branch, known by the name of Canal of Breves, which is the natural arm of the Para, is not subject to the visitations of this terrible phenomenon, and its tides are of a more regular description. Araujo, the pilot, was quite aware of this. He steered, therefore, into the midst of magnificent forests, here and there gliding past islands covered with muritis palms, and the weather was so favourable that they did not experience any of the storms which so frequently rage along this Breves Canal.

A few days afterwards the jangada passed the village of this name, which, although built on ground flooded for many months in the year, has become, since 1845, an important town of a hundred houses. In the centre of this country, frequented by Tapuyas, the Indians of the Lower Amazon become more and more commingled with the white population, and will end by being absorbed by them.

And still the jangada continued its journey down the river. Here, at the risk of entanglement, it grazed the branches of the mangliers, whose roots stretched down into the waters like the claws of gigantic crustaceans; then the smooth trunks of the paletuviers, with their pale green foliage, served as the resting-places for the long poles of the crew as they kept the raft in the strength of the current.

Then came the Tocantins, whose waters, due to the different rivers of the province of Goyaz, mingle with those of the Amazon by an embouchure of great size, then the Moju, then the town of Santa Ana.

Majestically the panorama of both banks moved along without a pause, as though some ingenious mechanism necessitated it

unrolling in the opposite direction to that of the stream.

Already numerous vessels descending the river, ubas, egariteas, vigilindas, pirogues of all builds, and small coasters from the lower districts of the Amazon and the Atlantic seaboard, formed a procession with the giant raft, and seemed like sloops beside some mighty man-of-war.

At length there appeared on the left Santa Maria de Belem do Para—the "town"

as they call it in that country—with its picturesque lines of white houses at many different levels, its convents nestled among the palm-trees, the steeples of its cathedral and of Nostra Senora de Merced, and the flotilla of its brigantines, brigs, and barques, which form its commercial communications with the old world.

The hearts of the passengers of the giant raft beat high. At length they were coming to the end of the voyage which

they had thought they would never reach. While the arrest of Joam detained them at Manaos, half way on their journey, could they ever have hoped to see the capital of this province of Para?

It was in the course of this day, the 15th of October—four months and a half after leaving the fazenda of Iquitos—that Belem came in sight as they rounded a sharp bend in the river.

(To be continued.)

THE ILL-USED BOY; OR, LAWRENCE HARTLEY'S GRIEVANCES.

By MRS. ELOART, AUTHOR OF "JACK AND JOHN," ETC., ETC.

CHAPTER XXVII.—HOW LAWRENCE WENT OFF AS WELL AS THE PISTOL.



LAWRENCE sent Mary away shortly after Robert and Ted had gone. He told her he was better, and should do very well by himself. Then, when she had gone, he rose, dressed, and put two or three things together, opened his desk, and took out what money he had. There was a sovereign there, which his uncle had given him only a day or two before; and he had a watch again—a silver one, which his uncle had had when a boy. He had told him that if he took care of that till Christmas he should replace it very likely with a gold one. Ah! how good that Uncle Richard had always been to him! And what a return he had made him! He was possessed by one dim idea; dim, but very dreadful—he could not stay at Clapton. To wait—wait—wait—while his uncle lay between life and death, and to see in other eyes what he had seen in Ted's, would drive him mad. He would get away to Heidelberg, to his mother, and tell her everything. In this great trouble and misery that had come upon him he was doing as many a one, far older than he, had done before now—going to his mother as though he were again a little child. He had very little idea how to get to Heidelberg. It was in Germany, he knew, and his mother had gone to Antwerp, and then to Cologne. He had had long letters from her and his sisters, telling him of all that they had seen on their travels. He had hardly cared to read those letters at the time; he had almost grumbled at receiving them. "They were so long, and then a fellow was expected to answer them!" Ah! if his mother wrote to him now, he would know how to value her letters, for surely a mother would never look upon her son as Ted had looked on him!

Before he went he sat down and wrote to Robert, and left the letter directed to him outside his desk. This was what he wrote:

"Dear Robert,—I am going to Heidelberg, to my mother. I can't stay here. I don't know how to breathe, how to bear the place; it all seems so dreadful. I'm not afraid, as Ted seemed to think by the way he looked at me, of what might happen to me if people found out what I'd done. That's not it. I know I deserve hanging for it, and if it wasn't for the

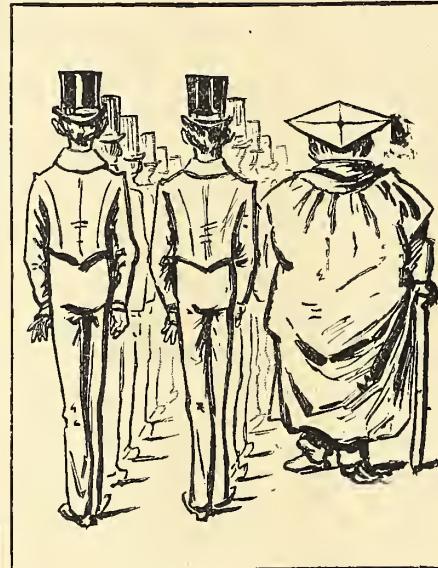
disgrace to those belonging to me I'm sure I shouldn't mind. I should only be out of my misery. But to stay here and have every one looking at me as if I was another Cain—nothing more than a murderer—is more than I can do. I feel as if it would send me mad. Please write to me at the Pension Anglaise, Heidelberg. I shall never come back again even if Uncle Richard gets better. How could I look him or any one in the face after what I've done? But if he shouldn't get better, and any one gets into trouble about it, tell the truth and send for me. I've done harm enough, and I don't want any one—not even those housebreaking rascals—to suffer on my account; and if Uncle Richard gets well enough to be talked to, give him my best love, and say, if it's any comfort to him, that I'm the most miserable fellow in the world, and shall never know a day's peace again. Good-bye.

"Your wretched but affectionate cousin,
"LAWRENCE HARTLEY."

He meant it, every word. Life did seem positively unendurable just then, and it seemed to him also as if it never could be anything else; he would have come back and given himself up to justice if there had been any need; and he left the house where he might have known nothing but happiness, and certainly had known nothing but kindness and goodness, feeling like an outcast.

It was the early morning when he left; no shops were open—nothing astir. It was chilly and dull. He looked up at the house, and felt as if his heart would break. Then he walked on, and with heavy steps made the best of his way to St. Katherine's Wharf.

(To be continued.)



"The March of Intellect."

OUR NOTE BOOK.

AN ARCHBISHOP'S ADVICE.—The Archbishop of Canterbury, writing recently on behalf of the Young Men's Friendly Society, gives some advice to youths that is well worth pondering. He said: "England has hitherto, by God's blessing, borne a high character. Men are proud of being citizens of Christian England, and not without cause. A high spirit, and a sound judgment, and a power of self-control which leads to any sacrifice where the public good is involved—these are the characteristics of a noble people; without these, men become the slaves of their own wavering passions, and are made ripe for some form or other of political slavery as the result of their moral degradation. To be self-restrained, to learn to resist temptations, to become energetic in the discharge of duty—this is the characteristic of a well-disciplined army. If the mass of young Englishmen now feeling their growing powers, and rising year by year to importance in their several social positions, are to be what they ought to be, they must be soldiers of Christ. Now, discipline is greatly promoted by a wise system of association. Young men will and must have associates. A youth who has no companions is generally a poor specimen. But if companionship is left to mere accident there is every chance that it will increase temptation. A young man comes from his home in the country, and is thrown, say, in the midst of London. If he has no one to give him a friendly hand, he must naturally take up with any who are brought near him in the routine of business or the pursuit of relaxation. He is kept busy all day, but he must have his amusements. Unacquainted

with the town, he does not know where or how safely to seek them. It is as likely as not that some young man more knowing and less Christian than himself will seek his society, and initiate him into what is called 'life.' It will be well for him, then, if he finds in his counting-house or shop that there are certain young men older than himself who think it a duty to look after the new-comers; who ask him to join a band of pleasant companions, and find it no bar to their pleasure that they seek to be guided by Christian principle!"

Some Fishing Lines.

WHAT is there in angling but dangling
A line at the end of a pole,
And thinking "if wishes were fishes,
How easy to take out a shoal!"

I've found nothing in angling but tangling
My line in the stump of a tree;
And then franticly lugging and tugging
And breaking the whole to get free!

If two go out angling, then wrangling
Is sure to set in before night,
Much more if some gudgeon (eurmudgeon)
Has swallowed *both* baits at one bite!

It stops all their angling—this jangling
As to which can lay claim to the spoils,
Though in long grass they lose it, each views it
As having been caught by *his* toils.

At the very best, angling is mangling
The poor little innocent dears!
How in such an employment enjoyment
Ever should—(Here she burst into tears.)

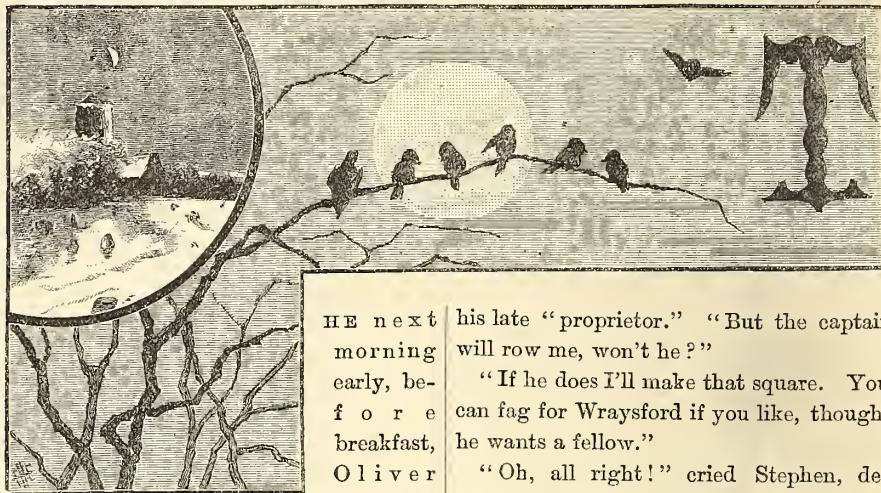
Oh! can't you persuade them and aid them
To give up so cruel a folly?
If 'tis vain to entreat them, then beat them,
Is the prayer of yours feckly,

"Dolly."

* * * * *

(P.S. by her young brother.)

Don't you, Mr. Editor, credit her;
Last night, without ever a sob,
She ate all the grayling that (failing
Of trout) were brought home by yours,
"Bob."



HE next morning early, before breakfast, Oliver joined the Doctor in his study, and made a clean breast to him there and then of Stephen's delinquencies. He had evidently taken the right step in doing so, for, hearing it all thus frankly confessed by the elder brother, Dr. Senior was disposed to take a much more lenient view of the case than had the information come to him through any other channel.

But at its best the offence was a grave one, and Oliver more than once felt anxious at the sight of the head master's long face during the narrative. However, when it was all over his fears were at once dispelled by the Doctor saying, "Well, Greenfield, you've done a very proper thing in telling me all this; it is a straightforward as well as a brotherly act. Your brother seems to have been very foolish, but I have no doubt he has got a lesson. You had better send him to me after morning service."

And so, much relieved, Oliver went off and reported to the grateful Stephen the success of his mission, and the two boys went off to the school chapel together a good deal more happy than they had been the previous day.

"I say," said Stephen, as they went along, "I suppose you didn't say anything about Loman, did you?"

"Of course not! he's no concern of mine," said Oliver, rather tartly. "But look here, young 'un, I'm not going to let you fag any more for him, or have anything to do with him."

"All right!" said Stephen, who had no desire to continue his acquaintance with

his late "proprietor." "But the captain will row me, won't he?"

"If he does I'll make that square. You can fag for Wraysford if you like, though, he wants a fellow."

"Oh, all right!" cried Stephen, delighted; "that'll be jolly! I like old Wray."

"Very kind of you," said a voice close by.

It was Wraysford himself, who had come in for this very genuine compliment.

"Hullo! I say, look here, Wraysford," said the beaming Stephen, "I'm going to cut Loman and fag for you. Isn't it jolly?"

"Depends on whether I have you. I don't want any Guinea-pigs in my study, mind."

Stephen's face fell. For even such a privilege as fagging for Wraysford he could not afford to sever the sacred ties which held him to the fellowship of the Guinea-pigs. "I really wouldn't kick up shines," said he, imploringly.

"You'd be a rum Guinea-pig if you didn't!" was the flattering answer. "And how many times a week would you go on strike, eh?"

"Oh!" said Stephen, "I'll never go on strike again; I don't like it."

The two friends laughed at this ingenuous admission, and then Wraysford said,

"Well, I'll have you; but mind, I'm awfully particular, and knock my fags about tremendously, don't I, Noll?"

"I don't mind that," said the delighted Stephen. "Besides, you've not had a fag to knock about!"

After morning service Stephen duly went to the Doctor, who talked to him very seriously. I need not repeat the lecture here. Stephen was very penitent, and had

THE FIFTH FORM AT ST. DOMINIC'S:

A PUBLIC SCHOOL STORY.

BY THE AUTHOR OF "THE ADVENTURES OF A THREE GUINEA WATCH," ETC.

CHAPTER XXII.—THE "NIGHTINGALE" EXAMINATION.

the good sense to say as little as possible; but when it was all over he thanked the Doctor gratefully, and promised he should never have to talk to him for bad conduct again.

"You must thank your brother for my not dealing a great deal more severely with the case," said Dr. Senior, "and I am quite ready to believe it will not occur again. Now, good-bye."

And off Stephen went, the happiest boy alive, determined more than ever to respect the Doctor's authority, and prove himself a model boy all over St. Dominic's.

Sunday afternoon at St. Dominic's was usually spent by the boys, in fine weather, in strolling about in the gardens, or rambling into the woods by the banks of the Shar.

This afternoon, however, was somewhat overcast, and a good many of the boys consequently preferred staying indoors to running the risk of spoiling their best hats in a shower. Among those who kept the house was Oliver, who, in reply to Wraysford's invitation to go out, pleaded that he was not in the humour.

This, indeed, was the case, for now that Stephen's affairs were settled, the dread of the approaching Nightingale examination came back over him like a nightmare, and made him quite miserable. The nearer the hour of trial came the more convinced did Oliver become that he stood no chance whatever of winning, and with that conviction all the bright hopes of a university course, and the prospects of after-success, seemed extinguished.

Of course it was very ridiculous of him to work himself into such a state, but then, reader, be had been working just a little too hard, and it was hardly his fault if he was ridiculous.

Wraysford, though by no means in high spirits, kept his head a good deal better, and tried to enjoy his walk and forget all about books, as if nothing at all was going to happen to-morrow. As for Loman, he was not visible from morning till night, and a good many guessed, and guessed correctly, that he was at work, even on Sunday.

The small boys, not so much, I fear, out of reverence for the day as for partisanship of the Fifth, were very indignant on the subject, and held a small full-dress meeting after tea, to protest against one of the candidates taking such an unfair advantage over the others.

"He ought to be expelled," exclaimed Paul.

"All very well," said Bramble. "Greenfield senior's cramming too, he's been in all the afternoon."

"He's not cramming, he's got a headache!" said Stephen.

"Oh yes, I dare say, don't you, Padger? Got a headache—that's a nice excuse for copying out of cribs on a Sunday."

"He doesn't use cribs, and I tell you he's not working," said Stephen, indignantly.

"Shut up, do you hear, or you'll get turned out, Potboy!"

This was too much for Stephen, who left the assembly in disgust, after threatening to take an early opportunity on the next day of giving his adversary "one for himself," a threat which we may as well say at once here he did not fail to carry out with his wounded energy.

The long Sunday ended at last—a Sunday spoiled to many of the boys of St. Dominic's by distracting thoughts and cares—a day which many impatiently

wished over, and which some wished would never give place to the morrow.

But that morrow came at last, and with it rose Oliver, strengthened and hopeful once more for the trial that lay before him. He was early at Wraysford's study, whom he found only just out of bed.

"Look alive, old man. What do you say to a dip in the river before breakfast? We've got plenty of time, and it will wash off the cobwebs before the exam."

"All serene," said Wraysford, not very cheerily, though. "Anything's better than doing nothing."

"Why, Wray, I thought you weren't going to let yourself get down about it?"

"I thought you weren't going to let yourself get up—why, you're quite festive this morning."

"Well, you see, a fellow can't do better than his best, and so as I have done my best I don't mean to punish myself by getting in the blues."

"Pity you didn't make that resolution yesterday. You were awfully glum, you know, then; and now I've got my turn, you see."

"Oh, never mind, a plunge in the Shar will set you all right."

"Stee," said he, addressing his younger brother, who that moment entered proudly in his new capacity as Wraysford's fag, "mind you have breakfast ready sharp by eight, do you hear? the best you can get out of Wray's cupboard. Come along, old boy."

And so they went down to the river, Oliver in unusual good spirits, and Wraysford most unusually depressed and nervous. The bathe was not a great success, for Wraysford evidently did not enjoy it.

"What's wrong, old man?" said Oliver, as they walked back; "aren't you well?"

"I'm all right," said Wraysford.

"But you're out of spirits. It's odd that I was in dumps and you were in good spirits up to the fatal day, and now things are just reversed. But, I say, you mustn't get down, you know, or it'll tell against you at the exam."

"It strikes me every answer I give will tell against me. All I hope is, that you get the scholarship."

"I mean to try, just like you and Loman. It remains to be seen who wins."

And so they went in to breakfast, which was a solemn meal, and despite Stephen's care in hunting up delicacies, not very well partaken of.

It seemed ages before the nine o'clock bell summoned them down to the Fifth Form room.

Here, however, the sympathy and encouragements of the class-fellows amply served to pass the time till the examination began.

"Well, you fellows," cried Pembury, as the two entered, "do you feel like winning?"

"Not more than usual," said Oliver. "How do you feel?"

"Oh, particularly cheerful, for I've nothing to do all day, I find. I'm not in for the Nightingale, or for the Mathematical Medal, or for the English Literature. Simon's in for that, you know, so there's no chance for any one."

Simon smiled very blandly at this side compliment.

"So you fellows," continued Touy, "may command my services from morning to night if you like."

"Loman was grinding hard all yesterday," said Braddy, "I'm afraid he'll be rather a hot one to beat."

"But we *must* beat him, mind, you fellows," said Ricketts, calmly comprehending the whole class in his "we."

"Why, Wray," said another, "how jolly blue you look! For goodness' sake don't funk it, old man, or it's all U P."

"Who's going to funk it?" said Oliver, impatiently, on his friend's behalf. "I tell you Wray will most likely win."

"Well, as long as one of you does," said Tom Senior, with noble impartiality, "we don't care which, do we, Braddy?"

"Of course not."

So, then, all this sympathy and encouragement was not for the two boys at all, but for their form. They might just as well have been two carefully trained racehorses starting on a race with heavy odds upon them.

The Doctor's entry, however, put an end to any further talk, and, as usual, a dead silence ensued after the boys had taken their seats.

The Doctor looked a little uneasy. Doubtless he was impressed, too, by the importance of the occasion. He proceeded to call over the lists of candidates for the different examinations in a fidgety manner, very unlike his usual self, and then turning abruptly to the class, said,

"The Mathematical Medal candidates will remain here for examination. The English Literature and Nightingale Scholarship candidates will be examined in the Sixth Form room. Boys not in for either of these examinations may go to their studies till the 12 o'clock bell rings. Before you disperse, however," and here the Doctor grew still more fidgety, "I want to mention one matter which I have already mentioned in the Sixth. I mention it not because I suspect any boy here of a dis honourable act, but because—the matter being a mystery—I feel I must not neglect the most remote opportunity of clearing it up."

What on earth was coming? It was as good as a ghost story, every one was so spellbound and mystified.

"On Saturday evening I had occasion to leave my study for rather less than five minutes, shortly after nine o'clock. I had been engaged in getting together the various papers of questions for to-day's examinations, and left them lying on the corner of the table. On returning to my study—I had not been absent five minutes—I found that one of the papers—one of the Nightingale Scholarship papers, which I had only just copied out, was missing. If I were not perfectly sure the full number was there before I left the room, I should conclude I was mistaken, but of that I am sure. I just wish to ask this one question here, which I have already asked in the Sixth. Does any boy present know anything about the missing paper?"

You might have heard a pin drop as the Doctor paused for a reply.

"No? I expected not, I am quite satisfied. You can disperse, boys, to your various places."

"What a fellow the Doctor is for speeches, Wray," said Oliver, as he and his friend made their way to the Sixth Form room.

"Yes. But that's a very queer thing about the paper, though."

"Oh, he's certain to have mislaid it somewhere. It's a queer thing saying anything about it; for it looks uncommonly as if he suspected some one."

"So it does. Oh, horrors! here we are at the torture chamber! I wish it was all over!"

They entered the Sixth Form room, which was regularly cleared for action. One long desk was allotted to the three Nightingale candidates, two others to the English Literature boys, and another to the competitors in a Sixth Form Greek verse contest.

Loman was already in his place, waiting with flushed face for the ordeal to begin. The two friends took their seats without vouchsafing any notice on their rival, and an uncomfortable two minutes ensued, during which it seemed as if the Doctor were never to arrive.

He did arrive at last, however, bringing with him the examination papers for the various classes.

"Boys for the Greek verse prize come forward."

Wren, Raleigh, Winter, and Callonby advanced, and received each one his paper.

"Boys for the Nightingale Scholarship come forward."

The three competitors obeyed the summons, and to each was handed a paper.

It was not in human nature to forbear glancing hurriedly at the momentous questions, as each walked slowly back to his seat. The effect of that momentary glance was very different on the three boys. Wraysford's face slightly lengthened, Loman's grew suddenly aghast, Oliver's betrayed no emotion whatever.

"Boys for the English Literature prize come forward."

These duly advanced and were furnished, and then silence reigned in the room, broken only by the rapid scratching of pens, and the solemn tick of the clock on the wall.

Reader, you doubtless know the horrors of an examination-room as well as I do. You know what it is to sit biting the end of your pen, and glaring at the ruthless question in front of you. You know what it is to dash nervously from question to question, answering a bit of this and a bit of that, but lacking the patience to work steadily down the list. And you have experienced doubt-

That was Simon. He had got hold of a question which was after his own heart, and demanded every second of his attention—"Describe, in not more than twelve lines of blank verse, the natural beauties of the River Shar." Here was a chance for the Dominican poet!

"The Shar is a very beautiful stream,
Of the Ouse a tributary;
Up at Gusset Weir it's prettiest I ween
Because there the birds sing so merry."

These four lines the poet styled, "Canto One," Cantos 2, 3, and 4 were much of the same excellence, and altogether the effusion was in one of Simon's happiest moods. Alas! as another poet said, "Art is long, time is fleeting." The clock pointed to three long before the bard had penned his fifth canto; and sadly and regretfully he and his fellow-candidates gathered together and handed in their papers, for better or worse.

Among the last to finish up was Oliver, who had been working hammer and tongs during the whole examination.

"How did you get on?" said Wraysford, as they walked back to the Fifth.

"Middling, not so bad as I feared; how did you?"

"Not very grand, I'm afraid; but better than I expected," said Wraysford. "But

I say, did you see how gravelled Loman seemed? I fancy he didn't do very much."

"So I thought; but I hadn't time to watch him much."

In the Fifth there was a crowd of questioners eager to ascertain how their champions had fared; and great was their delight to learn that neither was utterly cast down at his own efforts.

"You fellows are regular bricks if you get it!" cried Ricketts.

"It'll be the best thing has happened for the Fifth for a long time."

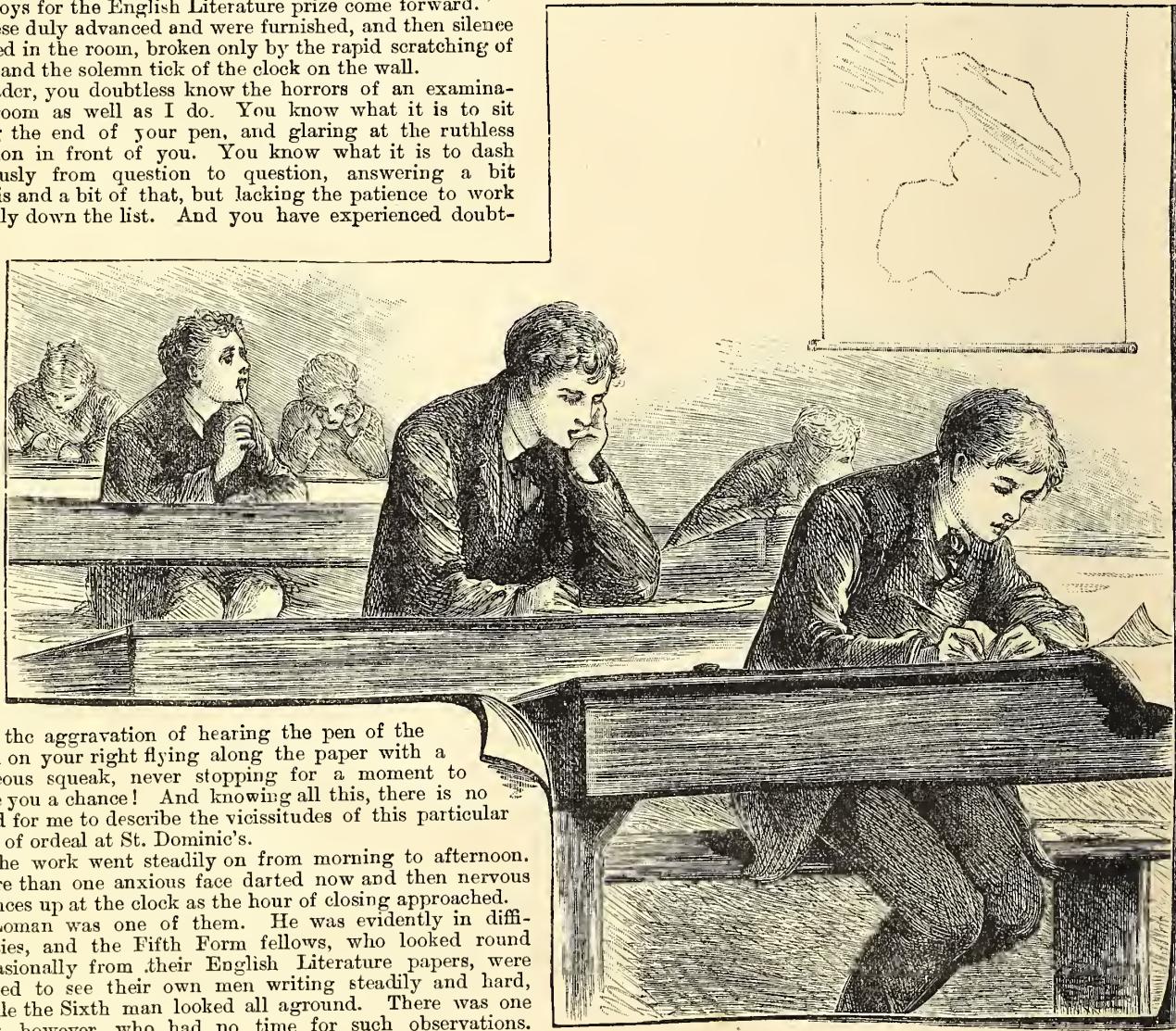
"Oh, I say," said Simon, suddenly, addressing Oliver in a peculiarly knowing tone, "wasn't it funny, that about the Doctor losing the paper? Just the very time I met you coming out of his study, you know, on Saturday evening. But of course I won't say anything. Only wasn't it funny?"

What had come over Oliver, that he suddenly turned crimson, and without a single word struck the speaker angrily on the forehead?

Was he mad? or could it possibly be that—

Before the assembled Fifth could recover from their astonishment or conjecture as to the motive for this sudden exhibition of feeling, he turned abruptly to the door and quitted the room.

(To be continued.)



less the aggravation of hearing the pen of the man on your right flying along the paper with a hideous squeak, never stopping for a moment to give you a chance! And knowing all this, there is no need for me to describe the vicissitudes of this particular day of ordeal at St. Dominic's.

The work went steadily on from morning to afternoon. More than one anxious face darted now and then nervous glances up at the clock as the hour of closing approached.

Loman was one of them. He was evidently in difficulties, and the Fifth Form fellows, who looked round occasionally from their English Literature papers, were elated to see their own men writing steadily and hard, while the Sixth man looked all aground. There was one boy, however, who had no time for such observations.

HAND GUNNER 1485



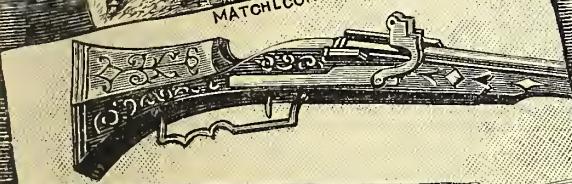
HAND GUNNER 15TH CENT.



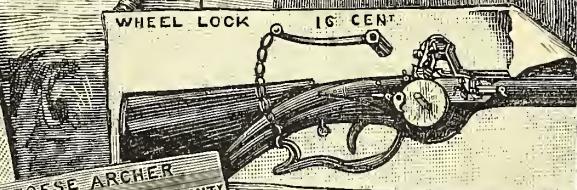
DRAGOON WITH HAND-CUN 15TH CENT.



MATCHLOCK HARQUEBUS 17 CENT.



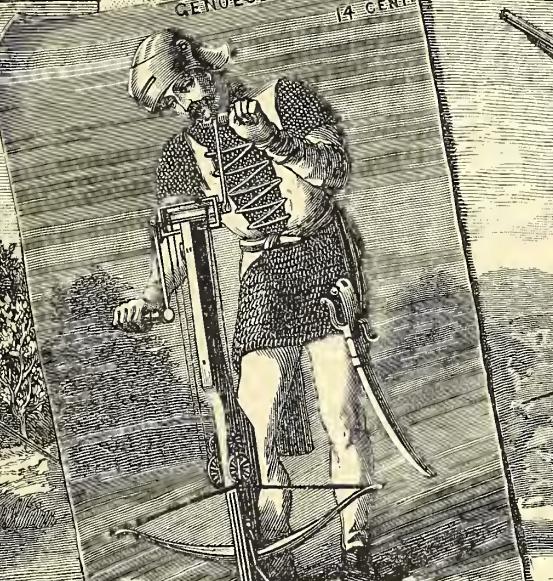
WHEEL LOCK 16 CENT.



MUSQUETEER 1586



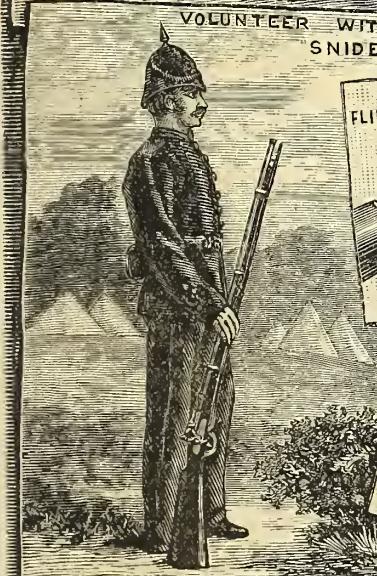
GENOISE ARCHER 14 CENT.



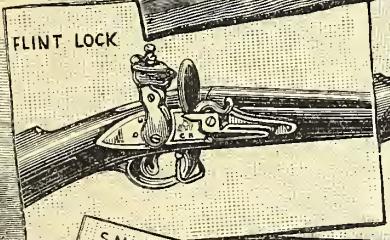
CALIVER MAN 17 CENT.



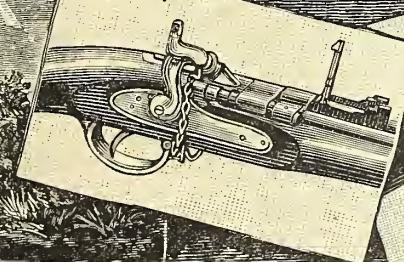
VOLUNTEER WITH "SNIDER"



FLINT LOCK

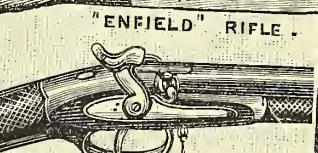


SNIDER

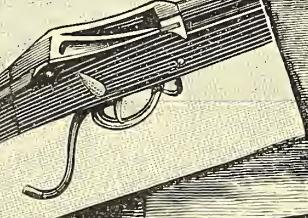


FOOT GUARD WITH "MARTINI"

"ENFIELD" RIFLE



MARTINI HENRY



SMALL ARMS.



VIDENTLY the club, and the pointed stick used as a spear, were the earliest means used for the destruction of animals and for warfare; then almost simultaneously comes the application of the pointed stick to the bow. Strong men who used bows and arrows had, of course, the advantage over their weaker brethren by being able to shoot greater distances with accuracy than men of less muscular power. But as there always

have been men with more strength in their brains than in their muscles, weapons were in due course invented for hunting and warfare that did not require physical strength.

The arbalast, or cross-bow, is a bow with a stock fitted in the centre, along which the string is drawn by means of levers. This weapon was known to the Romans at an early period, and appears depicted in missals of the eleventh century, showing that it was used in England at that time. In the picture by Antonio Pollainolo, in the National Gallery, of the "Martyrdom of St. Sebastian," we can see the simpler forms of arbalasts. Our central illustration of the preceding page represents a Genoese arbalaster using an elaborate machine to wind up the string of his weapon.

The first small firearms were simply small cannons held in the hands. They appear delineated in ms. as early as 1420 A.D. Our illustration represents a dragoon with his gun (or "gonne," as it was then spelt) suspended from his neck and held against his corslet by his left hand; his right hand holds the slow match for firing. In the other illustration the handle of the gun is longer, and towards the end is grasped under the shoulder at the armpit.

Towards the close of the fifteenth century a wooden stock appears, which enabled the gun to be fired from the shoulder. A pan was now added to the right side of the touch-hole to hold the priming, also a flat piece of metal that turned on a pin for protecting the priming from the wind and rain.

The matchlock with trigger was next invented, and its appearance indicated the arquebus—or harquebus (see illustration)—which was invented in the latter part of the fifteenth century, a specimen of which—constructed to load at the breach—is preserved in the Tower of London, and is supposed to have formerly belonged to Henry VIII.

In the next invention the stock was made to slope, which improvement appears in the weapon called "haquebut," or hagbut, which was known in this country in the reign of Richard III. A stronger weapon was afterwards constructed for the purpose of propelling heavy bullets, and the new gun received the name of "musquet." Our illustration represents a musqueteer; around his neck is a strap, from which hang various bags containing bullets, moulds, and priming powder; also below his waist is suspended his powder-flask, his right hand contains the slow-match and gun-rest; the latter article was necessary from the weight of the musquet. The firing of this weapon was a slow process, each shot taking about fifteen minutes in preparation.

The caliver (see illustration) was another weapon similarly constructed. It was shorter and lighter, and could be fired quicker than the musquet; it was also wider in the bore, hence the name "calibre," which got corrupted into "caliver." Attempts were now made to supersede the slow match, which must have been troublesome to keep alight, besides dangerous to the gunpowder one's comrades carried.

The wheel-lock was one of the first steps in this direction (see illustration). It consisted of a grooved wheel, to the axis of which a spring was attached; this was wound up with a spanner after the manner of a watch-key. A piece of pyrites (a mineral containing sulphur and iron) was fitted into the lock-head. When the trigger was pulled it released the wheel, and spinning round in contact with the pyrites, sparks were emitted and the charge fired. This mechanism was uncertain, and both this and early flint-locks were mostly fitted with the slow-match-holder for use in case of failure. The application of flint and steel to a gunlock first appeared in the snapshane, which was a Dutch invention.

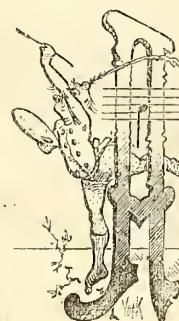
The old flint-lock, after doing duty in the Peninsular war and Waterloo, was superseded by the percussion gun known as Brown Bess, with which the troops were chiefly armed during the Crimean war, but the few Minie rifles the infantry had, suggested the importance of arming all the troops with the vastly improved weapon. It had long been discovered that a thin rotatory groove made down the inside of the barrel of a gun, and a bullet forced to slide down the grooves caused the missile to travel a greater distance and with more correctness.

The Germans claim the invention of rifles as early as 1381, but the earliest patent for rifling guns in England dates 1635. In 1851 Minie rifles that propelled an elongated bullet were served out generally to our army. Hitherto rifles had been only used by a few special regiments, such as the Duke's Own Rifle Brigade. I can recollect when a little boy being told that when a rifleman was taken prisoner he was always shot without mercy. In 1853 the Minie rifle was succeeded by the long Enfield, which had three grooves, and the short Enfield with five grooves was introduced in 1856. During this revolution of arms the Prussians were not idle. They tacitly adopted a breech-loader, which was called here the needle-gun, because the charge was ignited inside the gun by means of the blow and perforation of the cartridge by a piece of steel wire. The defeat of the Austrians by the Prussians at the battle of Sadowa in 1866 displayed the importance of this new breech-loader. In 1864 our Government availed themselves of the invention of a gunmaker of the name of Snider, who undertook to convert the Enfield rifle to a breech-loader at a cost of twenty shillings a rifle. This arm is still used by our volunteers (see illustration). The French also adopted a breech-loader called the Chassepot, which claims a superiority over the needle-gun in range, accuracy, and simplicity.

Our Government then offered inducements to gunmakers for the production of rifles developing further improvements. Mr. Martini and Mr. Henry were the favoured competitors, and it was decided by the judges at the War Office that the two inventions combined would make the best weapon for the British army. They chose Martini's mechanism for the breech-loading and Henry's system for rifling the barrel, hence the name this arm bears (Martini-Henry). It can be fired with accuracy at the rapid rate of twenty rounds in less than a minute of time, and is effective at a range of 1,200 yards.

MULTUM IN PARVO;
OR, A POCKET PHILOSOPHER.

s I strolled along the meadows on a recent winter day,
I spied a youthful schoolboy with a mongrel pup at play
He shook with lightsome laughter as the awkward terrier sped
In haste to catch his curly tail, which still kept well ahead.



I called the youngster to me with a gentle
“Hither, lad!
Your face is somewhat dirty, but your features
are not bad;
Your arms are straight, your shoulders square,
you've ruddy cheeks and lips,
But you seem to be deformed about the region
of the hips.

“And why, O bashful rustic, do you vainly
struggle so
To pocket both your hands, although your
pockets overflow?
Come, take them out and show to me what
spoils lie hidden there,
And I'll give to you a penny if I find I've one
to spare.”

The lad looked half suspicious, but he acted as
I bid;
From out his left-hand pocket he produced a
saucepans lid;
To balance that he slowly dragged from forth
the other side,
A whistle and a pegtop, with a sprig of London
Pride.

Then down upon the grass there fell in one un-
ceasing flow
Nine marbles and a piece of string, a dozen nuts
or so,
The collar of his mongrel pup, a pencil without
point,
The socket and some inches of a fishing-rod's
top joint.

“Come, come, my little conjuror, don't bring
out more, I beg,
It seems to me your pockets must be longer
than your leg;”
He did not answer, but he grinned a wide un-
meaning smile,
And kept a constant streamlet from his pockets
all the while.

I did not know till then that bones were looked
upon as toys,
Nor did I know that bladeless knives were
treasured up by boys;
I did not think that toffee was improved by
cobbler's wax,
And I'd failed to see the pleasure of collecting
loose tin tacks.

I gave the lad a penny and a pat upon the head,
“I hope your head's no emptier than your
pockets are,” I said;
He looked up with a smigger, for the coin had
made him bold,
“I often fills they pockets with a lot more
than they'll hold.

“It saves a deal of trouble if it is a tightish fit,
You've always got things handy, though they
chafes your legs a bit;”
Then he added as I smiled a smile I could not
quite control,—
“You should see what I gets in 'em when
they've got a good big hole!

PAUL BLAKE.

GOATS AND GOAT-KEEPING.

PART III.

HAVING now ascertained to the best of your judgment that the goat is no older than it was represented, and that it is a good milker and good in points, you must next find out whether it be healthy or not. I cannot lay down rules to enable you to determine whether or not a goat be in good health, but the following hints may be of use. A healthy goat, then, is a sprightly, happy looking goat, that, quiet though she may be, takes an interest in her surroundings, and does not seem afraid of anything. She has a bright sparkling eye, a damp nose, and a good appetite, with hard gums and a sweet breath.

Get the pedigree if possible with the goat, for there is a deal in this. See that she comes of a strain that have been for some time celebrated for their milking qualities. A good pedigree goat is worth shillings if not pounds more than one without such a pedigree. Fourthly and lastly, What should you pay for a really good Nanny in full milk? The answer is, If she is young, of large size, and good strain or pedigree, and a really good milker—giving about two quarts a day—and an animal of quiet non-vicious tendencies, you will have her really cheap if you pay only two guineas for her. If she does not give so much milk, about thirty shillings would be enough to give. To some of my young readers this may seem a deal of money to begin with, after taking into consideration the outlay for the house and fittings, food, etc. Well, I but lay before them plain facts, and after reading my next paper, wherein I shall deal with feeding, etc., they will be in a better position to count costs before going into the market to buy. Meanwhile let me remind them that the best cow's milk is at present five-pence a quart. Goat's milk is far more nourishing and often an in calculable boon to the invalid or to delicate children; it ought to sell easily for ten-pence a quart, but say only eight-pence, and say your goat only gives a quart and a half a day, well, that is one shilling a day at least.

It is a good plan to buy not only a goat in full milk but a young Nanny kid at the same time. You can purchase the latter for about ten shillings, and the two together will cost but little more to keep than the one. By-and-by this kid will breed, and you will have a nice young goat to keep up your supply of milk. You will have kids as well, and if you have a field or common where they can frisk about and feed and grow, until it is time to kill them for table, so much the better, and so much the more profit to you as stock-keeper. The flesh of a young suckling kid, when properly dressed and cooked, is most delicate and delicious eating, but if you do not care to kill them, you can always find a ready market for them when they are about six months old, if not before then.

(To be continued.)

THE TWO CABIN-BOYS:

A STORY OF ADVENTURE BY LAND AND SEA.

BY LOUIS ROUSSELET.

CHAPTER XXI.—OLD PLANS AND OLD FRIENDS.



time for us to set to work. We have got to earn our dinner and our bed!"

The young Frenchman rubbed his eyes. After reading the fragment of Bastien's journal he had fallen asleep, his mind full of pleasant anticipations, which his dreams soon converted into realities. Rich, and staggering beneath the weight of his gold, he beheld himself triumphantly entering one of the best hotels in Melbourne, the servants bowing down to the ground before him, every one anxious to gratify his slightest wish; and then, at Penguin's shout, he found himself in a stuffy attic, with the light shining in with difficulty through a small-paned dormer window. Bitter disenchantment! Would the dream never become a reality?

Daniel sighed and got up.

"You sigh," said Penguin. "It seems to me I have allowed you to be pretty comfortable. But we are not here to amuse ourselves. We shall soon be at the end of the couple of shillings we have left. What shall we do then?"

"You are right," said Daniel. "We must find some occupation which will yield us the wherewithal to live. I do not expect it will be very difficult for us to do so, as from what I have been often told there has been plenty of work in this country since the discovery of the gold-fields."

"The best thing for us to do would be to find a good captain as soon as possible and get on board ship," said Penguin. "I have already had enough of this place, where everything is topsy-turvy, where the beggars are grand seigneurs, where the savages are more charitable than the whites, where the birds are quadrupeds, and the trees have neither fruits nor shade."

"But you know very well that it is impossible for us to go away from Australia in that manner!"

"Why so? I do not know anything of the kind."

"That is true," said Daniel, with embarrassment; and then affectionately taking the hand of the young Canadian, he continued, "My good Martial, I love you more than a friend, more than a brother. I owe you so much that I know not how I shall ever be able to repay you. You have twice saved my life."

"Never mind that," interrupted the Canadian. "I only did what you would have done in my place."

"In short, I love you because you are better than I am, and if I have not revealed my secret to you before, it is because my

conscience reproaches me with my past conduct, and I was afraid of having to blush in your presence. But I will now be frank. You shall know everything, and I leave it to you to decide."

Then Daniel told him the history of his adventures, from his departure from Castell to his engagement with Captain Goulard. He explained how he had been led to open the gold-digger's pocket-book, and then he related the flight of Dominique and the fortunate discovery of Bastien's plan.

The tale was told, and Daniel bowed his head and waited for his friend's verdict. Penguin remained lost in thought.

"Do you know what has become of Madame Moreau?" he asked, at last.

"Did I not tell you she left Cetee without giving any address?"

"Well, to tell you frankly, the only thing I blame you for is that you came away without making every effort to discover the gold-digger's widow. Remember that the poor woman is still perhaps ignorant of the death of her husband, that she is ignorant of the fortune which has been left her, and that for two years, perhaps, she has been without any means."

"What shall we do, then?"

"We must, in the first place, attempt to obtain some information respecting Bastien Moreau. Did he not tell you that the whole of his fortune had been invested in property in Victoria?"

"Yes, at Melbourne and in the neighbourhood."

"Then whatever will have become of it, with nobody here to look after it, in a country which, I should think, is the rendezvous of all the thieves in the world? In any case, a lucky chance has caused Bastien's secret to fall into your hands. We must try and find the treasure, and when we have discovered it we will return to France and present to Madame Moreau the gold which belongs to her. Is not that what you wanted to do?"

Daniel blushed and hesitated, but overcoming his confusion, he said,

"No, Martial, that is not what I intended to do. When the paper fell into my hands I thought only of myself. It seemed to me that this treasure belonged to me, and I saw myself already rich."

"That was wrong," interrupted Penguin.

"I felt that it was wrong. The secret oppressed me; it weighed on my mind, and I never thought of the simple and just solution that you suggest. You are right. We must seek the fortune and return it to Madame Moreau. I am happy now. Would that I could become as good as you."

And in an outburst of gratitude he threw himself on his friend's neck.

"You are better than you think," said Penguin, "only you do not always see very clearly, and you run blindly ahead without thinking that you may come in contact with some serious obstacle;" and then, to bring the scene to a close, he added, "Let us look at the famous plan."

Daniel drew it from its hiding-place and laid it unfolded on the table before Penguin, who began to examine it attentively. "Do you know the position of the Murray and the Murrumbidgee?" he asked.

"That I don't!" said Daniel. "All I could make out from Bastien's journal was that the spot is in the interior of the country, in the midst of a desert."

"Oh, bother it! How shall we get there? It is not so pleasant going so far into the interior; we know something about



that already. Then we shall have to purchase tools and provisions, which will assuredly cost us money, and at this moment we have only got two shillings, and that is

right in telling you that sailors always meet again?"

The young Frenchman raised his head. "Dominique!" he exclaimed.



"What do you think I saw?"

Just sufficient for our breakfast this morning, for this wretched inn is as dear as the best hotel in Quebec."

"Well, we will wait till we have got a little money," said Daniel; "we will work."

"Just so; and while at work we will pick up the necessary information, and we will start on the journey only when we are well equipped. That is an understood thing. Let us go and have something to eat and think it over."

They descended to the saloon and ordered breakfast. The room, in spite of the bright sun which flooded the outside with light, was very gloomy, and in the half-light which prevailed the lads did not notice a man seated alone at a table near to theirs. On the other hand, the stranger examined the new-comers attentively. Satisfied apparently with his examination, he rose and advanced boldly towards them. "Well," said he, suddenly, to Daniel, "was I not

"Himself," said the sailor, and, turning towards the Canadian, he graciously added, "Mr. Penguin, I believe?"

"Just so," quietly replied the lad.

The two boys looked at one another and felt rather embarrassed, but the sailor, in no way disconcerted at the coolness of the reception, took a stool and seated himself at their table, shouting at the same time to the waiter, "Let me have my breakfast here with these gentlemen." And then, addressing Martial, "You would not believe how happy I am to find myself once more among friends, for you must allow me, Mr. Penguin, to look upon you as one. The friends of our friends are our friends, is it not so? It is an old proverb," added he, with a grin.

The Canadian vouchsafed no reply to this amiable declaration, but the imperturbable Dominique continued, "I am so much the more happy to see Daniel again as I have, in truth, to apologise to him pretty con-

siderably. Just imagine for a moment that when I left the Three Parrots Hotel I was so sorry to separate from my young friend that I fled precipitately at night like a thief. I seized my bundle of clothes in the chest of drawers, and thrust it under my arm and ran off."

On hearing this barefaced admission of the theft Daniel's face darkened.

"I embarked," continued the sailor, "and once on board I threw my bundle into a corner of my locker, and then I thought of it no more. The Belle Therese took me to Algiers, where we sailed with liquors, thence we plied to and fro between Oran and Carthagena, and lastly we made for Madeira, where the captain was to take in a cargo of cochineal."

Penguin, to whom this narrative was of little interest, could not repress a yawn.

"There is no fun up to the present," continued Dominique, "but wait for the end. At Madeira I found you again—at least, I found my young friend here again, for I then had not the honour of Mr. Penguin's acquaintance. I found you then in full fight, and I had the luck to come to your rescue. On the morrow I was still quite affected at our meeting, when the captain upset me about some trifles, and I demanded my wages, took my bundle, and went ashore. Two hours afterwards I had again got to work, and was aboard the Bulldog, bound for Melbourne. Hardly had I got on board when I went below, and, as my costume began to want a clean up, I looked for a change of clothes. I opened my bundle, and what do you think I saw in the middle of my things? I will give you a thousand guesses."

Daniel, who was all attention, trembled with emotion.

"Well," continued Dominique, "I found there, in my bundle, Daniel's pocket-book!"

"Bastien Moreau's pocket-book!" exclaimed the two cabin-boys.

"Precisely. When I saw it I thought I should have tumbled head over heels. 'Martigues, my friend,' said I, 'you are a dishonoured man. Your pupil, Daniel Riva, will think that you stole this. What you had better do is to plunge head foremost into the sea.' However, I said in a moment, 'That is not possible, Daniel Riva knows you better; he knows you are an honest man. He will not dare to suspect his old comrade—'"

"What have you done with the pocket-book?" asked Daniel, in an agitated tone.

"Ah! That is a long story!" continued the sailor, appearing embarrassed. "When I came here every one was running off to the gold-fields, and I did as the others did, but fortune did not favour me. I came back to Melbourne without a halfpenny. Then I thought of the money in the pocket-book, and I said if you were here you would not refuse to come to my aid, and so I took some of the money—but not all—and there still remain a couple of hundred francs; they are yours, and I am ready to give them up to you."

Groping in his pocket, Dominique drew out eight sovereigns, which he displayed before Daniel.

"This is on account," added he. "I will hand over the rest as soon as I can."

"And the pocket-book?"

"The pocket-book! Behold it!"

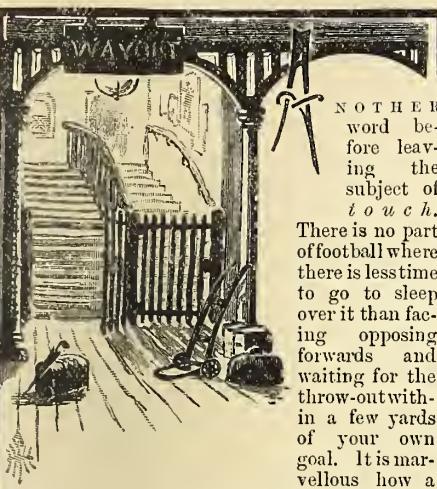
And with a gesture of well-feigned simplicity the sailor placed the leather case before the young Frenchman.

(To be continued.)

RUGBY FOOTBALL, AND HOW TO EXCEL IN IT.

By DR. IRVINE, THE SCOTTISH CAPTAIN.

PART XV.



NOTHE R word before leaving the subject of *touch*.

There is no part of football where there is less time to go to sleep over it than facing opposing forwards and waiting for the throw-out within a few yards of your own goal. It is marvellous how a lot of forwards,

who out in midfield do not seem to care which side gets the ball from the throw-out, and who appear careless and sleepy-headed about the business, waken up and are on the ball and the man like lions when the same game is going on near their own goal-line. Their chief danger is the passing back by their opponents and the downfall of their goal by a drop.

I would say this to forwards lining-out for a throw out of touch near an opponent's goal-line, Have more in your minds to throw back than to get in yourselves. And to the defending forwards I would say, Look out particularly for your opponents passing back. I would advocate much more passing back on the part of the lining-out forwards than is usually practised in any part of the field. Close to their own goal-line I would advise them to, whenever they can, throw back to their men behind to have it touched down. It is quite fair strategy, though their opponents may not like it. It is a common thing to see the side which is on the defensive afraid to throw out at all, and simply time after time to see the man in touch shoving the ball into the arms of his own forward who is next the touch-line, who simply steps into touch and repeats the process. This is most stupid and funky play. Far better in these circumstances avail yourselves of the alternative, which is to walk it out any distance between five and fifteen yards, and thus form a maul.

Another abuse of touch is to take raking kicks far into touch, and this looks especially bad with a wind, with the mere object of wasting time. The use of touch to relieve your goal from a rush of opponents is quite fair, and good play; but a little kick will serve your purpose here, and it is quite a different case from a big kick far into touch merely to gain the time it takes to bring back the ball again. Another employment of touch occurs to me, which is not illegal, and I think would be quite justifiable *in extremis* (though I must say it would not look well), and that is to throw the ball back into touch. I have never seen it done, but I do not see why it may not be done when there is no time to do anything else. Always each mark a man in lining-out for a throw from touch. There are two points of danger in a throw-out near goal—viz., the two ends of the line; and I am not sure that the touch-end of the line is not the more dangerous, simply because it is apt to be least watched. Over and over again I have seen a try stolen by the ball being passed sharply to the forward next the line, who throws himself behind, while his opponents are each marking his man farther out, and especially watching the extreme end of the line. Try and throw straight out at right angles the first attempt. It is irritating to have the ball time after time thrown out crooked, just to be brought back again.

(9) *In Goal: its use and abuse.*—The primary use of the goal-line is to bound the ends of the field of play, as touch-line bounds its sides. But there is much important play goes on behind goal-line, in goal, for all that. Behind an opponent's goal-line is a sort of enchanted ground to the football-player. The sensation of crossing that mark with the ball under your arm, or close to your toe, is something to be experienced, but not described in words. It is one of the supreme moments in the life of a player. You know all about touching-down and taking out to the twenty-five. You know about tries and taking out for a place kick. And here I would take the opportunity of correcting a misstatement I made in an earlier paper. I said that the ball might be run in between the posts, but not taken out for a try between them. That was the rule up till lately. Now the ball may be taken out between the goal-posts, and it is hard to see why it should ever have been forbidden. But the laws of the Rugby game are in many cases mysterious. If asked, When should one touch-down behind one's own goal-line? I should say, Simply when it is necessary in order to prevent one's opponents doing it. Run it out and kick into touch whenever you can. There are certainly times of temptation. When you have a strong wind in your favour it is very apt to entice you to touch-down, even when not absolutely necessary, for the sake of the long drop you will get with the wind from the twenty-five. With a strong wind against you I should almost justify touching-down as necessary, rather than running it out and risking a drop into touch against a wind that may come with a puff and carry the ball back right in front of your goal. What about running back from the field of play behind your own goal-line, when pressed, and touching-down? It is only to be resorted to in moments of despair, after every spark of ambition has forsaken your bosom. It looks bad, it is hated by spectators, and scorned by enemies. Some say, on the principle that death is preferable to dishonour, that you should never do it. I do not agree with them. The moments when it should be resorted to are rare, but they occur, and then it not only *may*, but *should* be done, on the principle that anything is better, so long as it is not illegal, than letting your opponents have a try. The chief abuse of *in-goal* is that it is utilised too often.

The objective point of many players, I may say most, is not a goal, but a try. Now that is wrong. A try is a cumbersome and irrational way of getting a goal. The best way for a man to get a goal is to kick one from the field. A try is not a certain goal, but sending the ball between the posts is; and remember that a goal counts more than any number of tries. Always drop at goal when you have a chance, even though you feel pretty sure of a run in if you choose. It is the proper game, and the more it is practised by a side the better for that side at the end of the season. There is plenty of room in the game for both goals and tries. All that I say is, Remember that a goal comes first, and that the best kind of goal is the goal kicked from the field. A maul in goal is not a thing to be desired. It should very seldom occur. It must sometimes occur. My simple advice to players in regard to this is, get into one as seldom as possible; but once in one, hang on to the bitter end.

On running in, always try to get as nearly in straight behind goal as possible before touching-down. There should be plenty of room behind the goal-line to allow a wide run round. Remember you are not bound to touch-down once you get behind. You may if you choose pass to a friend, or run out again, in the hope of getting round and in nearer the goal. A touch-down far out is a very unsatisfactory point to gain; yet it is far better than no point at all, so take it rather than want; but don't take it if you can by hook or by crook do better. Never touch-down yourself if you think that by chucking to a friend you enable him to get into a more favourable position. The point of the whole game where selfishness is most apt to be displayed is in such a case as this. You have

run a long way, passed lots of opponents, got close to goal, and you see one back waiting for you whom you are doubtful if you can pass, pumped out as you are and he fresh. A friend following up is at your elbow, and says, "Chuck." Will you do it, or risk rush past the back and secure the honour and glory of the touch-down yourself? Certainly chuck. You lose the chance of getting behind. That is nothing. Your side gets the touch-down certain, that is everything. When a try is being kicked against you, don't stand still and accept the inevitable. It is not an inevitable goal, and you may prevent it by charging straight at the ball as soon as it touches the ground, and in the first place shake the nerve of the kicker, or in the second place touch the ball as it flies and thus make it no goal, even though you fail to deflect its course. To the placer I would say, Always take it far enough to render a successful charge in absolutely impossible, unless the kicker takes a fit at the critical moment, or does something equally improbable.

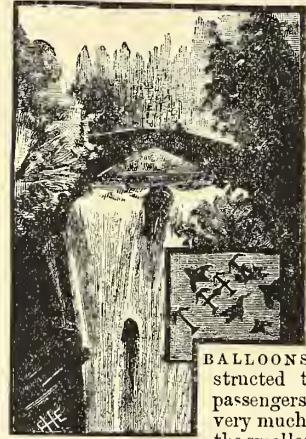
(10) *Touch-in-Goal.*—In this the ball is dead. Therefore never send it into your opponents' touch-in-goal for any purpose whatever. Always get it into your own touch-in-goal when you can. In a maul-in-goal try and roll the maul in there, and if you succeed you are safe. If an opponent has run across your goal-line, and you can charge or jam him into touch-in-goal before he touches-down, you have effectively drawn his teeth.

(To be continued.)

BALLOONS AND ALL ABOUT THEM.

BY A PROFESSIONAL AERONAUT AND BALLOON-MAKER.

PART III.



BALLOONS constructed to carry passengers vary very much in size, the smallest being

of 18,000 cubic feet capacity, capable of raising two people only—the aeronaut and one passenger. This, or a little larger, is the size of the balloon now generally used, larger balloons being made principally for scientific purposes. Such a one was the celebrated "Mammoth," supplied by Mr. Coxwell for the memorable investigations by Mr. Glaisher some nineteen years ago, of which I suppose you may probably have heard, and concerning which it may interest you to learn that on two of their ascents I had the honour of accompanying those famous aeronauts, the ascents taking place on both occasions from the Crystal Palace, and the descents once at Singlewell, near Gravesend, and once near Woking.

The gas with which an ordinary balloon is filled is the gas supplied by the gas companies for street and house lighting, which is called carbonated hydrogen. Pure hydrogen is seldom employed for balloon inflation, though it may be interesting to state that the big captive balloon at the Paris Exhibition was inflated with pure hydrogen, manufactured with sulphuric acid, zinc, and water. This is called sulphurated hydrogen, and possesses nearly double the lift-

ing power of coal gas. A balloon held down by a rope requires great ascending power, therefore all captive balloons should be inflated with pure hydrogen. The very great expense of this gas, however, prevents its use in ordinary cases.

The balloon being filled with gas, the aeronaut and his passenger take their seats in the car, ready to ascend. The first thing to be done is to untie the neck of the balloon, which has been fastened up with a piece of string or a handkerchief since the hose-pipe was removed, when the balloon was quite inflated. The object of having the neck of the balloon wide open is this: Directly the balloon rises expansion takes place, owing to the rarefied state of the atmosphere, and the higher it ascends the more rarefied the air becomes, and consequently the less atmospheric pressure is there upon the balloon, the natural consequence being that the gas expands, and makes its way by degrees out of the neck. If there were no such escape the balloon would burst. When the neck is wide open those in the car can see into the middle of the balloon, which has a very curious appearance.

We are now supposed to be ready for starting, there having been placed at the bottom of the car several more bags of ballast than are known to be required. These are handed out, one by one, until the weight in the car is about equal to or a little lighter than the ascending power of the balloon. Then the aeronaut, feeling himself master of the situation, calls out in a loud voice, "All hands off!" At the word of command the assistants, who have been keeping the car down, leave go their hold, and the balloon rises slowly and majestically into the air. (Please now to put yourself into the place of the passenger making his first ascent, with eyes and ears open to take in all the instruction that can be conveyed to him.)

When about fifteen feet in the air the passenger, who has by this time probably worked himself into a somewhat feverish state of excitement, is astonished and considerably alarmed by a sudden jerk or shock, and the equally sudden arrest of the balloon in its upward journey. The fact is that we had not finally left our mother earth, but have been pulled down again by a rope, held by the assistants, which was attached to the hoop by an instrument called the "liberating iron." The aeronaut himself lets the balloon take its final departure when he touches a lever attached to the liberating iron, and we are being pulled down again on the present occasion because it is found that we have too much ascending power, and can take in another half bag of ballast; and the more ballast a balloon can carry the better, as sometimes ballast is found to be worth its weight in gold—or rather, worth as much more as life is worth more than the most precious of all earthly possessions. At the risk of fatiguing you by a digression, I will explain how this is.

The use of ballast is in getting rid of it. When the aeronaut desires to descend he pulls the line I have before described, letting the gas out of the valve at the top, when the balloon immediately comes down. Perhaps unfavourable weather, with a strong wind, may have arisen, and he suddenly sees beneath him a village, or a barn, or perhaps he has been borne out to sea. In any of these cases almost certain death would be the result of a sudden descent. So he throws some ballast out of the car, which immediately lightens it, and the balloon rises up again and carries him over the danger to some place where the descent may be made in safety. If all the ballast be injudiciously or prematurely expended, there is danger, indeed, in descending; and I know of one instance, at least, in which a daring but unskillful aeronaut was killed, who, in all human probability, would have been now living if he had had with him but one more bag of ballast. So, you see, I do not exaggerate when I say that ballast is sometimes worth much more than its weight in gold.

To return to our ascent. Having taken on board the extra ballast, "All hands off!" is again called out aloud; again we ascend into

the air, the band strikes up, the guns are fired, the aeronaut, his hand upon the liberating iron, salutes the public, the rope is detached, we are off!

And now I will leave my passenger gazing over the side of the car, lost in amazement at the grandeur of the scene beneath him, as the horizon, rising with our ascent, discloses to view an expanse of country of which he could have had no previous conception; for I have work to do. First, I look at the aneroid barometer and find that we have arrived at an altitude of about three thousand feet, which is the height usually attained in an ordinary ascent.* The gas has been coming out of the neck very freely, and the balloon is consequently beginning to descend. As we do not intend to land just yet, however, it is necessary to check the descent by parting with a little ballast, which is thrown out over the edge of the car, and has the appearance of smoke as it passes into space.

Now we are about the same weight as the atmosphere with which we are travelling. Although there was only a slight breeze on the surface of the earth, the upper current is considerably stronger, and we are going along with the clouds at a speed of a little less than a mile a minute. Yet, though travelling at this rate, we appear to be in a dead calm, and if a feather be dropped from the car it will sink slowly in a perpendicular line underneath us. When a balloon has left the earth there is no perceptible motion in it whatever. We seem to be stationary, while the fields have the appearance of rushing quickly along beneath us. We are really, as it were, part and parcel of the air, and as the current moves so we drift with it, like a cork on a running stream, and if it were possible to put you blindfold into the car of a balloon, you might be taken up into the clouds and brought down again without your being any the wiser—indeed, without your knowing anything at all about the journey.

This I have been telling you while we have been sailing along through the beautiful summer sky, taking in deep gulps of the pure air, and looking down and around upon the glorious moving panorama. But now I must leave you again to your own resources, for it is time that we should prepare for the descent, and I require to have all my wits about me. The grapnel, which is hooked on to the edge of the car, is lowered down by the rope, which is 100 feet in length and firmly fastened to the hoop. Now we must exercise judgment and caution in selecting a proper place on which to make our descent by looking along the earth in the direction in which we are travelling. We must not come down among the crops, or we shall have the farmer after us for damages. The trees are particularly dangerous, as we have seen. So are the telegraph wires, for even if they should not destroy us, it would go hard with us in the Law Courts if we were to damage them. An aeronaut must thus have his eyes wide open, and be able to see some miles in front of him; and he must try to make for some open park or pasture land, which he can distinguish from land on which crops are growing by the cattle grazing. So the valve is opened a little, with the immediate effect of causing the balloon to descend to from 1000 to 500 feet above the earth.

Now we pass rapidly over the country until we arrive over the selected spot, when, giving the valve another stout pull, the balloon obeys and drops. Perhaps, on a closer inspection, the place we have chosen is not so favourable as it appeared at a distance; then, of course, we have to part with a bag of ballast, and ascend again until we reach a more suitable alighting ground. The grapnel takes hold at last, and on a calm day the balloon may be brought down as lightly as a feather by the regulating of the ballast, but when there is a strong current of air the grapnel will sometimes trail, which

causes the balloon to jerk unpleasantly, but with good management there is no danger.

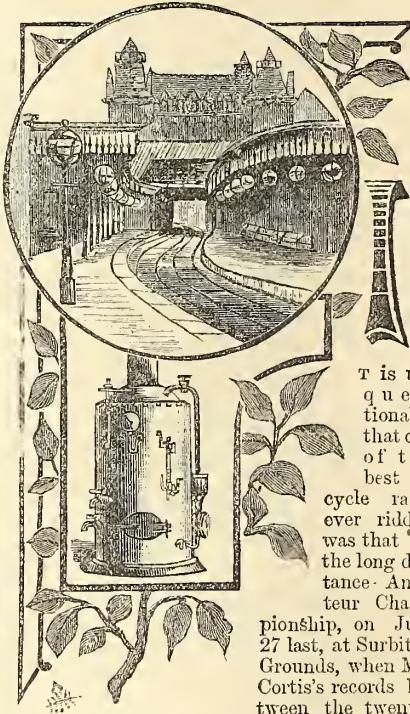
Having thus taken you up, and brought you safely down again, I will redeem the promise I make in the title by showing you

HOW TO MAKE A MODEL BALLOON, which, simple as it may seem, is in reality a very intricate operation, and you will find, as you follow me, that there is a great deal to be learned. I do not fancy you will think it at all dull work, however; on the contrary, while it is instructive and scientific, it will afford you many hours' agreeable and innocent amusement. You have been taught how to make yachts, and have been very delighted, I have no doubt, when your first attempt at shipbuilding has proved successful, and you have seen your ship float upon the water and carry sail; but I do not think there are many readers of the Boy's OWN PAPER who have had the opportunity of learning how to make a balloon which will actually hold gas and ascend into the air. Perhaps you will find this latter part of my treatise rather technical, yet I hope you will give it your attention, for I am about to endeavour to let you know more about this subject than has ever been written upon it before, and though I do not expect, or wish, to make you all professional aeronauts, I do certainly desire to awaken in your minds an interest in ballooning—a science which is daily becoming of more recognised importance.

(To be continued.)

THE BESTS ON RECORD.

BICYCLING IN 1881.



T is unquestionable that one of the best bicycle races ever ridden was that for the long distance Amateur Championship, on July 27 last, at Surbiton Grounds, when Mr. Cortis's records between the twenty-fifth and fiftieth

miles, and Mr. Griffith's fifty mile time, were so brilliantly surpassed. In our ninety-sixth number will be found full details of Mr. Cortis's great achievement in September, 1880, when, in his attempt to cover the twenty miles in an hour, he failed only by a trifle over 38sec., and riding on to twenty-five miles, credited himself with eleven "bests" at once, shortly afterwards retiring from the path with the proud distinction of having eclipsed every preceding record from three to fifty miles. On the occasion which formed the subject of that notice he had the assistance as pace-makers of Mr. G. Laey Hillier of the Stanley, Mr. Crute of the Sutton, and Mr. C. D. Vesey of the Surrey Bicycle Clubs, and these gentlemen, in addition to Messrs. J.

* For scientific purposes a balloon frequently ascends as high as three miles above the level of the sea, and sometimes as high as five miles. On one memorable occasion an aeronaut asserted that he ascended seven miles, but considerable doubt was cast on this statement, it being indeed far from certain that a human being could live in an atmosphere so rarefied.

F. Griffith of the Surrey—the holder of the then “best” for fifty miles, the 2h. 54min. 35sec. gained at Surbiton on July 17th, 1880—A. J. Crichton of Cambridge University, and C. Cousins, formed the competitors for the fifty miles race on the July Wednesday, when the records of the “demon medical” beyond the five-and-twenty received their quadruple discomfiture. The year 1881 will long be known in the bicycling world as “Hillier’s year,” for in it he won all the four championship contests, as Cortis had done in 1879, but in no case had he such difficulty in getting away from his men as in this prolonged neck-and-neck struggle. Everything was in favour of fast time; there was no wind, and the path was simply perfect; no surprise was therefore felt at the record being beaten. What gave rise to the wonder so freely expressed by the spectators was, that four men should be so evenly matched and trained that throughout a three-hours’ journey they should keep within such a few yards of each other.

The start took place at a quarter-past five, and Hillier jumped off with the lead, followed by Vesey, Crute, and Griffith. Crichton and Cousins were soon left far behind, and effected a judicious retirement. Three miles on the road Vesey came to the front, passing the mile mark at 9min. 35 $\frac{1}{2}$ sec. from the start, Hillier’s time for the one and two miles having been 3min. 9 $\frac{1}{2}$ sec. and 6min. 22sec. At the fourth mile, 12min. 43sec., Vesey still led, but immediately afterwards a change took place, and Hillier forged up in front, and led past the even mile with 15min. 56sec. His lead was not for long, however, for before the sixth mile Crute had got up extra steam and edged into first place, Hillier coming next, then Vesey, then Griffith, but all being quite close together. Crute covered the six miles in 19min. 16sec., and for more than sixteen miles retained his station in the van. At the expiration of the first hour 18 miles 510 yards had been covered; the twenty miles were reeled off in 1h. 5min. 47 $\frac{1}{2}$ sec., the twenty-three in 1h. 15min. 56 $\frac{1}{2}$ sec., and then finding that, though Cortis’s records below the twenty-five would remain undisturbed, his times beyond could be beaten, the riders woke up, and the struggle became more intense. Inch by inch Crute came back to his pursuers, and Hillier again glided to the front, passing the twenty-fourth mile in 1h. 19min. 6sec. Crute was not to be shaken off as yet, however, and during the next mile he again got in front, to be headed again as the mile was completed, and in the next mile he again deprived Hillier of the lead, to fall back once more as the mile mark was neared. The twenty-five miles were completed in 1h. 22min. 19sec.—Cortis had done the distance in 1h. 16min. 41 $\frac{1}{2}$ sec.—but this was the last of the old records which were left standing, and from the twenty-sixth mile upwards began a series of “bests,” which we tabulate below.

Hillier led at the twenty-seventh mile, as he had done at the twenty-sixth, and then Griffith had his turn and assumed the lead, Vesey slowly dropping back. For the next three miles, Griffith led; in the thirtieth mile Vesey was overtaken, and for the rest of the race kept forcing the pace in his unavailing efforts to come to close quarters again. After the thirty miles Griffith drew slowly back to his men, and gave way to Hillier, who took the record for the thirty-first mile, and shortly afterwards Crute slipped into second place.

In this order the three sped on their way for another thirteen miles, and when the second hour was reached Hillier had travelled a hundred yards short of thirty-six miles. At the forty-fifth mile Crute spurred up and led, but not for long. Seven laps from home so close was the running that the felloe of Griffith’s wheel clicked ominously against the hind part of Hillier’s machine, but no damage was done. In the forty-eighth mile Vesey made his last vain effort to get up, and at the same time Griffith passed Crute, and crept close up to Hillier. This order continued until the last mile, and then a rare bit of racing began. Hillier slowly left Griffith, but seemed for a time to

bring Crute along with him, as the distance between them remained the same, and Crute gave Griffith the go-by; and then, in the last half, Hillier shook off his antagonists, and with a final effort passed the post thirty yards in front of Crute, who was some forty in advance of Griffith. Vesey rode the distance out, and his time was 2h. 51min. 53 $\frac{1}{2}$ sec., so that all four of them beat the old time by several seconds. The following are the mile times once the records began to be erased—

MILES.	H.	M.	S.	MILES.	.	.	s.
	HILLIER.			38	....	2	7 35
26	....	1	25	34	39	....	2 11 21
27	....	1	29	3 $\frac{1}{2}$	40	....	2 15 6 $\frac{1}{2}$
					41	....	2 18 5 $\frac{1}{2}$
	GRIFFITH.			42	....	2 22 20 $\frac{1}{2}$	
28	....	1	32	21	43	....	2 26 5
29	....	1	35	43	44	....	2 29 46 $\frac{1}{2}$
30	....	1	39	11			
						CRUTE.	
	HILLIER.			45	....	2 33 13	
31	....	1	42	41 $\frac{1}{2}$			
32	....	1	46	41 $\frac{1}{2}$	HILLIER.		
33	....	1	49	34 $\frac{1}{2}$	46	....	2 36 47 $\frac{1}{2}$
34	....	1	53	5	47	....	2 40 25 $\frac{1}{2}$
35	....	1	56	47	48	....	2 44 8
36	....	2	0	15 $\frac{1}{2}$	49	....	2 47 42 $\frac{1}{2}$
37	....	2	3	47 $\frac{1}{2}$	50	....	2 50 50 $\frac{1}{2}$

Bicycle racing for longer distances is not often indulged in by amateurs, and the performances above fifty miles are not remarkable for the accuracy of their timing or for their number. Such as they were, however, they were all of them thrown into the shade some time after the race we have been describing by Mr. C. W. Vesey, who took such a prominent part therein. At the same ground, on the 26th of last October, he started at ten o’clock in the morning on an attempt to beat the professional time for the hundred miles, then and still standing against the name of A. Bills, who last year covered the century at Molineux Grounds, Wolverhampton, in 6h. 37min. 51sec., a performance a long way in front of anything then done by amateurs. In this attempt Mr. Vesey did not succeed, but he nevertheless achieved a noteworthy result, and credited himself with the amateur records from the fifty-first to the hundredth mile, the times being as given:—

MILES.	H.	M.	S.	MILES.	H.	M.	S.
51	3	7	45	76	....	4 56 25
52	3	11	35	77	....	5 1 4
53	3	15	19	78	....	5 7 37
54	3	19	4	79	....	5 11 49
55	3	22	54	80	....	5 16 9
56	3	26	50	81	....	5 20 27
57	3	30	38	82	....	5 24 45
58	3	34	24	83	....	5 29 3
59	3	38	21	84	....	5 33 46
60	3	42	19	85	....	5 38 25
61	3	46	56	86	....	5 43 22
62	3	51	39	87	....	5 48 18
63	3	55	42	88	....	5 53 14
64	4	0	24	89	....	5 57 47
65	4	5	20	90	....	6 2 32
66	4	9	58	91	....	6 7 0
67	4	14	39	92	....	6 11 29
68	4	19	17	93	....	6 15 47
69	4	23	55	94	....	6 19 51
70	4	28	59	95	....	6 24 17
71	4	33	27	96	....	6 28 32
72	4	38	30	97	....	6 33 8
73	4	42	46	98	....	6 37 33
74	4	47	13	99	....	6 42 13
75	4	51	42	100	....	6 45 54 $\frac{1}{2}$

In this article, and that in our number for the 13th of November, 1880, we have thus had the pleasure of chronicling no less than *eighty-six* bicycling bests. These range from eleven to a hundred miles, the exceptions being those for the fifteenth, sixteenth, seventeenth, and eighteenth miles, which were secured by Mr. Cortis previous to the commencement of our series.

OUR PRIZE COMPETITIONS.

(FOURTH SERIES.)

Illuminating.—SENIOR DIVISION.

WE offered in this Class, it will be remembered, a Prize of £2 2s. Three competitors run one another so closely, however, that we have increased the value of the prize to Three Guineas, and divide it amongst them. We have also been induced, by the excellence of much of the work sent in, to give some additional prizes. The following is our Award:—

Prizes.—One Guinea each.

JAMES MORTON TOWNSEND (aged 18 years), 1, Glossop Villas, Ashbourne Grove, East Dulwich, Surrey.

JOHN HERBERT STOTT (aged 17 years), 39, Horley Green Road, Claremont, Halifax.

FRANCIS E. MASEY (aged 19 years), 121, Milkwood Road, Herne Hill, s.e.

Prizes.—Half-a-Guinea each.

THOMAS WILEMAN (aged 19 years), 2, Stock Beck Villas, Kendal, Westmoreland.

ARTHUR C. CHAMBERS (aged 20), 15, Newcastle Road, Shelton, Stoke-on-Trent.

Prizes.—7s. 6d. each.

JOHN ALBERT SUTTON (aged 17 years), 8, Upper Stauhope Street, Toxteth Park, Liverpool.

WILLIAM H. TOWN (aged 20 years), Soutergate, Ulverston, Lancashire.

ERNEST A. JONES (aged 17 years), 58, Rue Defacqz, Brussels.

Certificates.

WALTER SCULL, Rugby Lodge, Norham Road, Oxford.

JAMES H. ROBERTSON, 8, Waterloo Place, Dundee.

JAMES E. FENWICK, Floral Cottage, Bridgend, Perth.

WALLACE FIDLER, New Square, Chesterfield, Derbyshire.

GEORGE H. JOHNSON, jun., 66, Milton Street, Maida-stone.

ERNEST W. HUTT, Lyons Vicarage, Fence Houses, Durham.

FREDK. G. P. BENSON, 6, Westgate, Ripon, Yorks.

JOHN W. PORTER, 140, Werneth Hall Road, Oldham.

HERBERT J. CALLINGHAM, Woodbine Cottage, Brighton Road, Surbiton.

ALEX. M. MORRISON, 10, Big Jack Close, Canongate, Edinburgh.

JAMES C. FLUX, Darby House, Canonbury Place, N.

THOMAS GOWLAND, 26, Cramond Street, New North Road, N.

WILLIAM E. MAIN, 4, Edinburgh Road, Hoe Street, Walthamstow.

THOMAS L. WINNETT, 6, The Grove, Gravesend.

WILLIAM KENDON, 69, Haggerston Road, Dalston, E.

WALTER SAGE, 7, John Street, St. Clement’s, Ipswich.

WILLIAM C. FREEMAN, jun., Clifton Villas, Upper Fane Road, Maidstone.

ARTHUR H. BUTCHER, “Magdala,” Napier Road, Redland, Bristol.

JOSHUA E. BOWMAKER, Post Office, St. James’s Road, Holloway.

FREDK. W. IVISON, Gardener’s Cottage, Flower Garden, Regent’s Park.

WM. NORFOLK, 8, Hailes Street, Edinburgh.

WM. HENRY WALTON, 18, Corn Market, Derby.

H. B. GREEN, Morden House, South Street, Greenwich.

WM. M. BUTCHER, “Magdala,” Napier Road, Redland, Bristol.

CHAS. W. DEELEY, 73, St. Helens Road, Swansea.

JAMES C. LAKE, jun., 19, Choumet Grove, Peckham, S.E.

SAMUEL TOWERS, 59, Bridge Street, Bolton.

ERNEST E. BAYFIELD, 46, Leverton Street, Kentish Town, N.W.

WILLIAM JOHN STURGEON, 5, Crown Villas, Crown Hill, Norwood, S.E.

SIDNEY GILLINGHAM, 244, Gray’s Inn Road, W.C.

ERNEST MATTHEWS, 7, Dollar Street, Cirencester, Gloucestershire.

WM. PENDER, 21, Hercules Street, Hillmount, Edinburgh.

H. H. B. PEARCE, 105, High Street, Smethwick, Birmingham.

DAVID C. WALKER, 82, Queen Street, Govan, Glasgow.

WILLIAM R. DAVIS, Ivy Cottage, Windsor Road, Lower Norwood.

ALFRED MATTHEWS, Church Street, Steyning, Sussex.

ERNEST W. BEST, 13, Paignton Road, Stamford Hill, N.

JOSEPH GEORGE REAVES, care of Mr. Worrall, 56, Swanswell Street, Hill Fields, Coventry.

WM. MCQUELLEN, 47, Diana Street, Newcastle-on-Tyne.

FREDERICK TAYLOR, Coombe Street, Chard, Somerset.

PERCY T. SMILY, 5, Sun Street, Finsbury, N.C.

HENRY T. OLDEN, 18, Nile Street, Cork, Ireland.

ALFRED JOHN WOOD, 40, Cuparstone Place, Aberdeen.

HARRY COOPER, Hanbury, Bromsgrove.

JOSEPH WILCOX, Eastington, Stonehouse, Gloucestershire.

JOSEPH B. WILSON, 33, Clyde Terrace, Spennymoor, Durham.

F. E. BOWMAN, The Children’s Home, Edgworth, near Bolton, Lancashire.

ALEX. HUBBARD, 16, Fairmead Road, Holloway, N.

JOHN EARNSHAW, 64, Down’s Park Road, Hackney, E.

E. T. WOODBRIDGE, 12, Hill Street, St. Helens, Ipswich.



Correspondence.

MILITARY.—There are no 1st, 2nd, 5th, or 6th Hussars. The uniform of the 3rd Hussars is blue, with scarlet collar, blue busby bag, and white plume; and that of the 4th Hussars is also blue, with yellow busby bag and scarlet plume. The 3rd are the King's Own, the 4th the Queen's Own. The cavalry consists of three regiments of Household Troops—in other words, the 1st and 2nd Life Guards, and the Horse Guards, or Blues; seven regiments of Dragoon Guards, of which the 1st is the King's Dragoon Guards, popularly known as the "K. D. G.'s;" the 2nd, the Queen's Bays; the 3rd, or Prince of Wales's; the 4th, or Royal Irish; the 5th, or Princess Charlotte of Wales's; the 6th, or Carabiniers; and the 7th, or Princess Royal's; and twenty-one regiments of Dragoons. Of these, three, the 1st, 2nd, and 6th, are Dragoons in the ordinary sense, the 1st being the Royals, the 2nd the Scots Greys, the 6th the Inniskillings; five of the twenty-one regiments are Lancers—the 5th, 9th, 12th, 16th, and 17th; and thirteen of the twenty-one are Hussars—the 3rd, 4th, 7th, 8th, 10th, 11th, 13th, 14th, 15th, 18th, 19th, 20th, and 21st. The 5th Lancers are the Royal Irish; the 9th the Queen's Royal; the 12th the Prince of Wales's Royal; the 16th, who have the scarlet coats, are the Queen's; and 17th, with the skull and crossbones, and "Death or Glory," are the Duke of Cambridge's Own. Hussar uniforms are always blue. The 11th have the crimson trousers.

BOW.—Mend the cracks in your violin with coaguline, and dip your finger-tips in brown vinegar to harden them.

JIM.—Rubber stamps are made by setting the names up in type in the ordinary way, and then taking a cast by pressing several sheets of paper on it, just as if you were stereotyping, only when the cast is ready, rubber composition instead of stereo-metal is poured in.

THIO.—Raspberry-jam wood comes from Australia. It is highly scented, and will polish equal to Spanish mahogany.

E. J. T.—Papers of a practical nature on the treatment of poultry are in course of preparation, and will be inserted in due time. We suspect the reason of your fowls moulting so badly is weakness from injudicious diet. Do you keep your run clean and whole-

some? We doubt if you have "tride all things."

BOY CAPTAIN.—A piece of old rotten wood, or bit of old blanketting, may suit both your green tree-frog and land-lizard.

X. Y. Z.—You mean *gorse-linnet*, we presume. Feed on seeds—canary and rape—and sparingly with hemp. Give gravel, clean cage, and pure water.

BALDER.—We fancy you have been imposed upon. Were you sold the bird as a fancy one or a workman?

MEMORANDA.—A paper on Fish and Reptile Stuffing will soon be published. The roach, perch, and carp you have "just" caught will hardly keep till then, though. So take this advice. Go on fishing—it is a glorious sport—until you read the paper, but cook all you catch. There are as good fish in sea or river as ever yet were taken.

A. ANCELL.—Canaries, even cock and hen birds, will sometimes have fancies, and refuse to pair; but, from all you say in your letter, we doubt whether you have not been trying to pair two of the same sex. Better luck next. The breeding season will soon be here, you know. Thanks for your good opinion of us.

A. DELICATE BOY.—1. Early rising, early sleeping, hard work, fresh air, and exercise are the only things we know of that will improve an appetite. 2. Pigeons sit for eighteen days.

A. H. J.—It is unnatural for thrushes to moult in summer, though they may pipe at any time. The tumours and swellings about the head are caused by some errors in the diet. They are too large to excise or burn. Try iodine paint, and put a little tincture of iron—say ten drops—in his water daily.

CYPRESS.—Write for forms to Lloyd's Paper Mills, Sittingbourne, Kent. Your waste-paper will probably produce as much for you there as anywhere.

JOHN STEWART.—Thanks. The Great Eastern at the time of writing is at Milford Haven. There is no book on Egg Collecting such as you require.

A. E. G.—The Portland Vase is a cinerary urn of dark blue glass, which used to belong to the Barberini. Sir William Hamilton bought it for a thousand guineas; and the Duke of Portland, into whose family it had come, lent it to the British Museum. In 1845 some thirster after notoriety deliberately smashed it into pieces; and after it was repaired it was replaced in the Museum, and is now carefully guarded as you describe.

COLLIER BOY.—1. The initials F.S.S. stand for Fellow of the Statistical Society, and F.L.S. for Fellow of the Linnean Society. Your use of capitals is not quite correct.

S. HARWITZ.—Your cousin was out if he had passed you before he ran back; if not, you were out.

VERY WINDY.—If at draughts the men are placed so that no move can be made, the game is drawn.

CECIL.—Lignum-vite is the heaviest; then in order of specific gravity come mahogany, ebony, box, oak, yew, apple, fir, hornbeam, ash, maple, pitch-pine, teak, birch, beech, elder, cherry, walnut, hazel, sycamore, and chestnut. The lightest wood next to cork is poplar, and then willow.

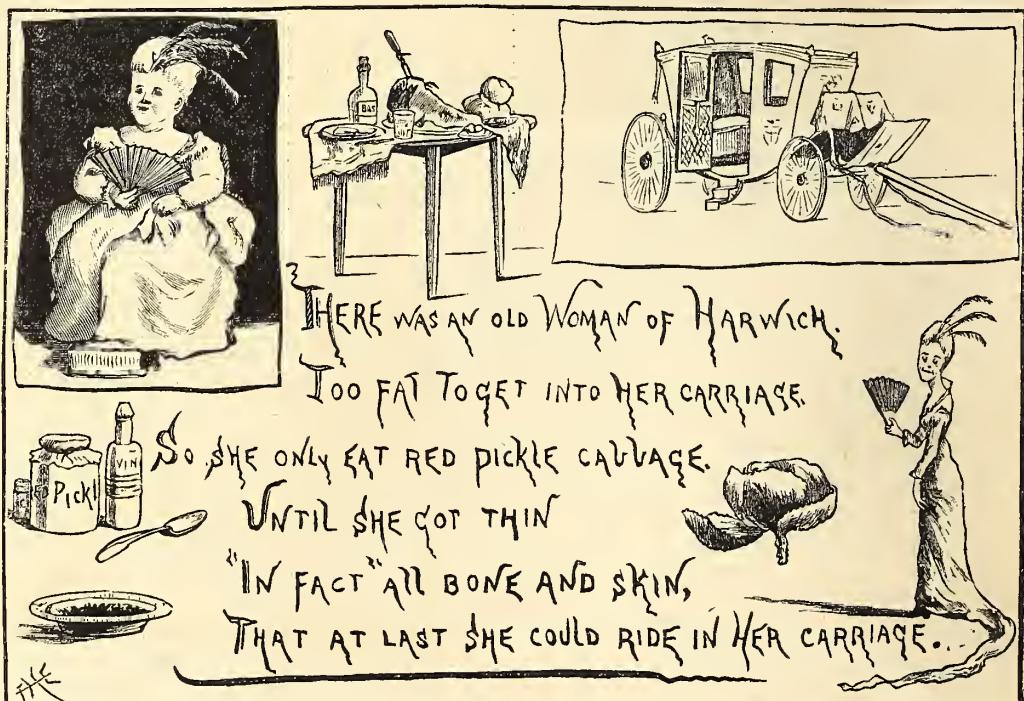
SAUNDERS.—The best sort of whitewash that we know is that used at the President's residence at Washington, the so-called White House. It is made as follows: Half a bushel of good unsaked lime is slaked with boiling water, and covered during the process to keep in the steam. The liquor is carefully strained and mixed with a peck of salt which has been dissolved in warm water; three pounds of good rice are then ground to a thin paste and stirred in while boiling hot, and there are also added half a pound of powdered whiting and a pound of glue made in the usual way, and added when hot and clear. Five gallons of hot water are then stirred into the mixture, which is then kept for a few days in a covered cask to settle. It is put on quite hot, and one pint will cover a square yard of ordinary brickwork.

BOY'S OWN PAPER.—Your best plan would be to write a small pamphlet describing the invention, and include the calendar as a supplement. You can then register the copyright of the book, and that will protect you. The registration is, however, of no use unless you can prove prior publication as well. When the book is published you take it to Stationers' Hall and pay five shillings. You cannot register anything which is not complete as sold or distributed to the public. Watch the new Copyright Act. You should instruct some one to look up the subject in the British Museum for you; scores of perpetual calendars have been invented, and after all your trouble and expense you may find your idea has been anticipated, and that you have to pay damages to some obscure individual who has sold perhaps a dozen copies during the last twenty years, and has not registered at Stationers' Hall.

MAQUINESTA.—Manuals of "Machine Construction and Drawing" are published by Cassell's, Lockwood and Co., Collins and Co., and many others. Cost, say two shillings.

C. T.—The chestnut wood of which furniture is made is that of the eating chestnut. There is no relation between the two trees. The horse-chestnut is a soapwort; the eating-chestnut is really a beech. Bass-wood is simply the wood of the American lime. Rosewood is so called from its colour; it has nothing to do with rose-trees. The butternut is the white walnut; bird's-eye maple comes from Prince Edward's Island. Cedar-wood is not the wood of the cedar-tree. The cedar is a conifer; but the cedar-wood of commerce, from which cigar-boxes, etc., are made, comes from tree nearly allied to the mahogany. Butchers' skewers are made of dogwood.

OLD COINER.—The coin is a Danish one, and your sketch shows its value, date, and reina in the nearest approach to English you can imagine.



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WILD ADVENTURES ROUND THE POLE; OR, THE CRUISE OF THE ARRANDOON.

(A SEQUEL TO "THE CRUISE OF THE SNOWBIRD.")

BY GORDON STABLES, M.D., R.N.

CHAPTER XXIV.—MAY-DAY IN THE ARCTIC REGIONS.

MAY-DAY! May-day in England! Surely, even to the minds of the youngest among us, these words bring some pleasant recollections.

"Ah! but," I think I hear you complain, "the May-days are not now what they were in the good old times; not the May-days we read of in books; not the May-days of merrie England. Where are the may-poles, with their circles of rosy-cheeked children dancing gleeomely around them? Where

May Day in the far North.

are the revels? Where are the games? Where is the little maiden persistent, who plagued her mother so, lest she should forget to wake and call her early—

“ Because I’m to be Queen o’ the May, mother,
I’m to be Queen o’ the May ? ”

And echo answers, “ Where ? ”

These things, maiden included, have passed away; they have fled like the fairies before the shriek of engine and rattle of railway wheels.

But May-day in England! Why, there is some pleasure and some joy left in it even yet. Summer comes with it, or promises it will soon be on the wing. Already in the meadows the cattle wade knee-deep in dewy grass, and cull sweet cowslips and daisies. A balmier air breathes over the land; the rising sun is rosy with hope; the lark springs from his nest among the tender corn, and mounts higher to sing than he has ever done before; flowers are blooming on every brae; the mossy banks are redolent of wild thyme; roses begin to peep coyly out in the hedgerows, and butterflies spread their wings, as a sailor spreads a sail, and go fluttering away through the gladsome sunshine. And yonder—why, yonder is a little maiden, and a very pretty one too, though she isn’t going to be Queen o’ the May. No, but she is tripping along towards the glade, where the pink-blossomed hawthorn grows, and the yellow scented furze. She is going to—

“ Bathe her sweet face in May-morn dew,
To make her look lovely all the year through.”

She glances shyly around her, hoping that no one sees her. You and I, dear reader, are far too manly to stand and stare so,—

Hey! presto! and the scene is changed. May-day! May-day in Greenland! An illimitable ocean of ice, stretching away on all sides towards every point of the compass, from where those ships are lying beset. It looks like some measureless wold covered with the snows of midwinter. It is early morning, though the sun shines brightly in a sky of cloudless blue, and, save for the footfall of the solitary watchman who paces the deck of the Arrandoon, there is not a sound to be heard, the stillness everywhere is as the stillness of death. An hour or two goes slowly by, then the watchman approaches the great bell that hangs amidships.

Dong-dong! dong-dong! dong-dong! dong-dong! Eight bells. The men spring up from hatch and companion-way, and soon the decks are crowded and the crew are busy enough. They have discussed their breakfast long ago, and have since been hard at work on the May-day garland, which they now proceed to hoist on high, ‘twixt fore and main masts. That garland is quite a work of art, and a very gay one too. Not a man in the ship that has not contributed a few ribbons to aid in decorating it. Those ribbons had been kept for this special purpose, and were the best loving gifts of sisters, wives, or sweethearts ere the vessel set sail for the sea of ice. But there is more to be done than hoisting the garland. The ship has to be dressed, and when this is finished, with her flags all floating around her, she will look as beautiful as a bride on her marriage morning.

Not the worse for the ducking and fright of the previous day, Rory was first up on this particular May-day, and tubbed and

dressed long before either Allan or Ralph was awake.

“ Get up, Ray! ” cried Rory, entering his friend’s cabin. “ Ray, Ray, RAY! ”

The last “ Ray ” was shouted.

“ Hullo! hullo! ” cried Ray. “ Oh! it’s you, is it, Row? Is breakfast all ready, old man? ”

“ Ray, arise, you lazy dog! ” continued Row, shaking him by the shoulder. “ This is May-morning, Ray, and I’m to be Queen of the May, my boy, I’m to be Queen of the May! ”

At half-past eight our heroes, Captain McBain included, went on deck in a body, and this was the time for the crew to cluster up the rigging, man the yards, and give voice to a ringing cheer; nay, not one cheer only, but three times three; and hardly had the sound died away ere it was taken up and re-echoed back by the crew of the *Canny Scotia*. It seemed that Captain Cobb’s cockle-shell was not to be left out of the fun either, for the crew of even that tiny craft must man the rigging and cheer, though after the lusty roar that had gone up from the other ships, their voices sounded like that of a chicken learning to crow.

After this, while the men went to work to rig a great platform on the upper deck, Peter, arrayed in fullest Highland costume, played pibroch after pibroch, and wild march after wild march, as he went strutting up and down the quarterdeck.

The decks were cleared of everything that could be removed, and a great tent erected from mizen to forecastle; when this was lined with flags there was but little light, but lamps in clusters were hung here and there, and a stove was brought up to give heat, so that the whole place was as gay as could be and comfortable as well.

At one end of the tent a platform was erected. There the piano was placed all handy, and Rory’s fiddle and the doctor’s flute, as well as several armchairs and a kind of throne, the use of which will soon be seen. On the stage at one side was an immense tub nearly filled with cold icy water; two steps led up to it, and on the edge thereof was a revolving chair. Very comfortable it looked indeed, but, on touching a spring, backwards it went, and whoever might be sitting on it had the benefit of a beautiful bath. My readers already guess what this is for. Yes, for May-day in Greenland is not only a day of fun and frolic, but the self-same kind of performance takes place as on southern ships while crossing the line.

The day itself was dedicated to games on the ice, for not until towards evening would the real fun begin. The seals had a rest to-day, and so had the sharks; even the terrible *zugaena* wasn’t once thought of, and Bruin himself might sit on one end licking his chops and looking on, so long as he kept at a respectful distance. The games were both Scotch and English, a happy medley in which all hands joined. The morning saw cricket and football matches in full swing, the afternoon golf—and golf played on hummocky ice is golf—and hockey. Peter was the band, and right well he played; but when, tired of march, quadrille, or pibroch, he burst into a Highland reel, and the crews began to dance—well, the scene on the snow grew exciting indeed. It was grotesque enough, too, in all conscience, for everybody, without exception, was dressed in fancy costume. No wonder, too, that Cockie, whom his master had brought on

deck to look down on them from the bulwarks, lost all control of himself, and shouted, “ Go on—go on—keep it up—keep it up. ” Then when Cockie began to throw his head back and shriek with laughter, the men couldn’t resist it any longer; they joined in that laugh, and laughed till sides ached and eyes ran water, and many had to roll in the snow to prevent catastrophes. But the louder the men laughed, all the louder laughed Cockie, till *Freezing Powders* was obliged to run below with him at last.

“ Oh! ” said his master, as he restored the cage to its corner, “ I tell you all day, Cockie, you eat too much hemp. It’s drefful, Cockie, to hear you laugh like all that. ”

Suddenly from the bows of the *Arrandoon* a big gun is fired and the revel stops. Then comes a hail from the crow’s-nest.

“ Below there! ”

“ Ay, ay! ” roared McBain.

“ A procession coming along over the snow, sir, towards the ship. ”

A consultation was at once held, and it was resolved to march forth to meet them.

“ It is Neptune, I know, ” said McBain, “ for a snowbird this morning brought me a note to say he’d dine with us. ”

It wasn’t long before our friends came in sight of the royal party. It was Neptune, sure enough, trident and all, both his trident and he looking as large as life. He was drawn along in a sledge by a party of naiads, and Amazon jades they looked. On one side of him walked his wife, on the other the *Cock o’ the North*, while behind him came the barber carrying an immense razor and a bucket of lather. Silas Grig, I may as well mention, played Neptune, and Seth his wife—and a taller, skinnier, bristlier old lady you couldn’t have imagined; and her attempts to act the lady of fashion, and her airs and graces, were really funny. The *Cock o’ the North* was Ted Wilson. He was dressed in feathers from top to toe, with an immense bill, comb, and wattles, and acted his part well. He was introduced by Neptune as—

“ One who ne’er has been to school,
But keeps us fat—in fact, our fool;
A fool, forsooth, yet full of wit
As he can stand, or lie, or sit. ”

After the usual introduction, salaams and courtesies, Neptune made his speech in doggerel verse, with many an interruption both from his wife and his fool, telling how “ his name was Neptune ”—“ though it might be Norval, ” added the *Cock o’ the North*. How,

“ From east to west, from pole to pole,
Where’er waves break or waters roll,
My empire is—”

His Wife.—“ And you belong to me.”
Cock o’ the North.—“ All hail, great monarch of
the sea! ”

Neptune.—“ The clouds pay tribute, and streams
and rills
Come singing from the distant hills.”

His Wife.—“ Do stop, my dear; you’re not a
poet,
And never were—”

Neptune.—“ Good sooth, I know it.
But now lead on, our blood feels cold,
For truth to tell, we’re getting old.
We and our wife have seen much service,
Besides—the dear old thing is nervous,
So to the ship lead on, I say,
We’d see some fun on this auspicious day.
My younger sons I fain would bless ‘em.”

His Barber.—“ And I can shave.”

His Wife (rapturously).—“ And I can kiss ‘em. ”

The six poor lads who were to be

operated on, and whose only fault was that they had never before crossed the line, trembled in their prison as they heard the big guns thunder forth, announcing the arrival of King Neptune. They trembled more when, dressed in white, they were led forth, a pair at a time, and seated blindfolded on the chair of the terrible tub, and duly shaved and blessed and kissed; but they trembled most when the bolt was drawn, and they tumbled head foremost into the icy water; but when, about twenty minutes thereafter, they were seen seated in a row in dry warm clothing, you would not have known them for the same boys. Their faces were beaming with smiles, and each one busied himself discussing a huge basin of savoury sea-pie. They were not trembling then at all.

At the dinner which followed, Neptune took the head of the table, with his wife on his right and McBain himself as vice-president. The dinner was good even for the Arrandoon, and that is saying a deal. In size, in odour and beauty of rotundity, the plum-pudding that two stalwart men carried in and placed in front of Neptune, was something to remember for ever and a day. Size? Why Neptune could have served it out with his trident. Ay! and everybody had two helps, and looked all the healthier and happier after them.

Our three chief heroes were in fine form, Rory in one of his funniest, happiest moods. And why not? Had not he dubbed himself Queen o' the May? Yes, and well he sustained the part.

I am not sure how Neptune managed to possess himself of so many bottles of Silas Grig's green ginger, but there they were, and they went all round the table, and even the men of the crew seemed to prefer it to rum. The toasts given by the men were not a few, and all did honour to the manliness of their hearts. The songs sung ere the table was cleared were all well worth listening to, though some were ballads of extreme length.

Neptune was full of anecdotes of his life and adventures, and his wife also had a good deal to say about hers, which caused many a peal of laughter to rattle round the table.

Some of the men recited pieces of their own composition. Here is one by the crew's pet, Ted Wilson to wit:

THE GHOST OF THE COCHIN-SHANGHAI.

" 'Tis a tale of the Greenland ocean,
A tale of the Northern seas,
Of a ship that sailed from her native land
On the wings of a favouring breeze ;

Her skipper as brave a seaman
As ever set sail before,
Her crew all told, as true and bold
As ever yet left the shore.

" And never a ship was better 'found,'
She couldn't be better, I know,
With beef in the rigging and porkers to kill,
And tanks filled with water below ;
And turkeys to fatten, and ducklings and
geese,
And the best Spanish pullets to lay ;
But the pride of the ship, and the pet of the
mess,
Was a Brahma cock-Cochin-Shanghai.
And every day when the watches were called,
This cock crew so cheery O !
With a shrill cock-a-lee, and a hoarse cock-
a-lo,
And a long cock-a-leerie O !
But still as the grave was the brave bird at
night,
For well did he know what was best ;
Yes, well the cock knew that most of the
crew
Were weary and wanted their rest.
But one awful night he awoke in a fright,
Then wasn't it dreary O !
To hear him crow, with a hoarse cock-a-lo,
And a shrill cock-a-leerie O !
Oh !

" Then out of bed scrambled the men in a mass,
'We cannot get sleep,' they all cried ;
' May we never reach dock till we silence that
cock,
We'll never have peace till the villain is
fried.'
All dressed as they were in the garments of
night,
Though the decks were deep covered with
snow,
They chased the cock round, with wild yell
and bound,
But they never got near him—no.
And wherever he flew, still the bold Cochin
crew,
With a shrill cock-a-lee, and a hoarse cock-
a-lo,
And a long cock-a-leerie O !

" Now, far up aloft, defiant he stands,
Like an eagle in eerie O !
Till a sea-boot at last knocked him down
from the mast,
And he sunk in the ocean below.
But the saddest part of the story is this :
He hadn't quite finished his crow,
He'd got just as far as the hoarse cock-a-lo,
But failed at the leerie O !
Oh-h !

" And that ship is still sailing, they say, on the
sea,
Though 'tis hundreds of years ago ;

Till they silence that cock they'll ne'er reach
a dock,
Nor lay down their burden of woe ;
For out on the boom, till the crack of doom,
The ghost of the Cochin will crow,
With his shrill cock-a-lee, and his hoarse
cock-a-lo,
But never the leerie O !
No !

" They tell me at times that the ship may be
seen
Struggling on o'er the billows o' blue,
That the hardest of hearts would melt like
the snow,
To witness the grief of that crew,
As they eye the cold waves, and long for their
graves,
Looking so weary O !
Will he never have done with that weird cock-
a-lee,
As well as the leerie O ?
Oh-h !

Dinner discussed, the fun commenced. In the first place, there were sailors' dances, and the floor was kept pretty well filled one way or another. But certainly the dances of the evening were the barber's "break-down," Rory's "Irish jig," and the doctor's "Hielan' fling." They were *solos*, of course, and the barber was the first to take the floor; and oh! the shuffling and the double-shuffling, and the tripleing and double-tripleing of that wonderful horn-pipe! No wonder he was cheered, and encored, and cheered again. Then came Rory, dressed in natty knickerbockers and carrying a shillelah; nobody could say at times which end of him was uppermost, or whether he did not just as often strike his seemingly adamantine head with his heels as with his shillelah. Lastly came Sandy McFlail in Highland costume, and being a countryman of my own, I must be modestly mum on the performance, only, towards the end of the "fling," you saw before you such a mist of waving arms and legs and plaid-ends, that you could not have been sure it was Sandy at all, and not an octopus.

But hark! there comes a shriek from the pack, so loud that it drowns the sounds of music and merriment. Men grow suddenly serious. Again they hear it, and there is a perceptible movement—a kind of thrill under their feet. It is the wail that never fails to give the first announcement of the breaking up of the sea of ice.

(To be continued.)

THE TWO CABIN-BOYS :

A STORY OF ADVENTURE BY LAND AND SEA.

BY LOUIS ROUSSELET.

CHAPTER XXI.—(Continued.)

latter could hardly believe his eyes. With a trembling hand he opened it, and tried the spring of the secret compartment. Everything was in its place. Then rising full of emotion, he threw himself on the crafty sailor's neck with,

"Thanks, Dominique; it is well that you have done this."

The sailor muttered some excuses.

"But," continued Daniel, "you will be without money."

"I shall not be very rich."

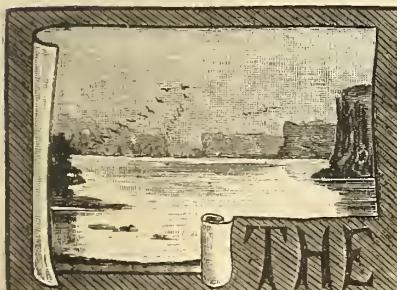
"Well, then, take half of this gold; the rest will do for us."

Dominique quickly pocketed the four pounds without a word. Then extending his hand to Penguin, who shook it coldly, he said,

"I am obliged to keep an appointment, but we will dine together this evening—that is understood."

And he departed, beside himself with glee at his admirable piece of acting.

In fact the story told by Dominique was



but an ingenious tissue of lies from one end to the other. After stealing the pocket-book with the single object of getting the money, he had decided, after reading Bastien's journal, to "try his luck" in Australia.

Unfortunately for him, once he got into the country, he found out how vague was the information given by the unfortunate gold-digger. However, he had joined with a few adventurers of even worse character than himself, and they had tried to find the mine discovered by Moreau. After a long and fruitless search in the interior he had returned to Melbourne penniless. But by haunting the gaming-houses where the diggers came in the hope of increasing their fortunes, he had at first gained enough to get along with, and then made what he called "a lucky hit," and became possessed of a considerable sum.

The thief was too shrewd to trust this to a gambler's chances, and was looking out for some new speculation when he found himself in the presence of Daniel.

At the sight of the lad his plan was rapidly conceived. He had convinced himself that the cabin-boy must possess Bastien's secret, and be able to elucidate the obscure point in the digger's journal, and it was necessary then at any price that he should regain the confidence of the young Frenchman.

We have seen how the restoration of a few sovereigns and the restitution of the stolen pocket-book sufficed to obtain this result.

Indeed, Daniel had been completely duped by the manœuvres of Martigues. As soon as the latter had gone he expressed his joy to Penguin.

"You can hardly imagine how happy I am at getting this pocket-book back again," said he. "It appears to me that the good resolution you caused me to take this morning is to bring good fortune along with it for the future. Now if we can discover the treasure I shall be able at last to execute the wishes of Bastien Moreau. And when I think that I was capable of believing in the guilt of Dominique! That honest, good-hearted fellow!"

"Nevertheless all this seems to me very suspicious," said Penguin, whom the demonstrations of Martigues had very slightly affected.

"It is because you are still under the influence of what I told you this morning," said Daniel.

"Perhaps; but in any case we have no need of your friend."

"On the contrary, Martigues may be more useful to us than anybody. He knows the country, and he has money."

"Your money?"

"No matter," said Daniel, warmly, "the main thing is that, thanks to him, we shall be able at once to put our project into execution; and, in addition, we have in him a sure and devoted helper."

"Listen," said Penguin; "it is not my place to accuse a man who on the whole has given you proof of a certain amount of honesty. The only thing that I ask is, that in the event of his setting out with us, you reveal to him your secret only when it shall have become useless to him—that is to say, when we are certain of the position of the treasure."

"I promise that, Martial; and, to insure greater prudence, you shall for the future carry the plan of the mine."

Dominique's four pounds assured their freedom from want for a short time, and, on the advice of Penguin, they set out im-

mediately in quest of information respecting Bastien Moreau's property. They inquired at the French consulate and the various Government offices, but everywhere they received the same reply,

"They had never seen at Melbourne, nor was there in the State, any Frenchman or landowner of the name."

In vain they persisted. Moreau had left no trace in the country. What then had become of his fortune? On their return to the Gay Companion, the cabin-boys found Dominique waiting for them at the door.

"Here you are," he said, as soon as he saw them. "It is seven o'clock, and our dinner is getting cold."

When they had entered the saloon he took them through it into the private parlour.

"I have engaged this room," he explained, "so that we may be able to deliberate more at our ease our providential meeting."

The dinner, thanks to the inexhaustible spirits of the sailor, was very merry. Daniel was already quite gained over, while Penguin felt his scruples vanishing by degrees. However, his face clouded when he heard Dominique exclaim over the dessert,

"Now let us chat a little! In the first place, Daniel, tell me how it is that I find you in Melbourne, having left you as a cabin-boy on board the Atlanta?"

The young Frenchman gave him a rapid recital of their cruise and shipwreck, and of their arrival in Victoria.

"All that smacks of the marvellous," exclaimed the sailor. "If I did not know you to be the most honourable lad in the world, I should say you were chaffing me, and had simply left the Atlanta because you were tired of her."

"You could believe that we had deserted?" asked Penguin, with some irritation.

"No, no!" continued Dominique, "I am too well acquainted with the affection you entertained for your captain. Besides, the Melbourne papers have had a good many articles on the mysterious disappearance of the Atlanta and the two United States frigates which were sent in pursuit of her. You alone, as I see, can clear up the mystery. But all this," he added, "does not tell me what you intend to do now you are in Melbourne."

"A chance, or rather the hand of Providence, has led us here to fulfil a sacred mission," said Daniel; "but that is a secret which we must religiously preserve."

"In that case, mun, you know!" said the mariner, placing the forefinger of his right hand to his nose.

"However, we cannot accomplish our task alone; we shall want an assistant, a companion. I have thought of you for that purpose. I know that I can count on your friendship, and I am ready to confide to you our secret on one condition."

"What is that?" demanded Dominique, whose lips trembled at seeing the prey falling into his net.

"It is that you vow never to reveal it to any one."

"I swear it—on my honour!" said the sailor, warmly.

"Besides, you already know the first part. You know that Bastien Moreau, the gold-digger, who died in my arms at Castell, had discovered in this part of Australia a gold mine of fabulous wealth. Well, I know exactly where this mine is to be found."

"You have the plan?" demanded Dominique, excitedly.

"That is to say," interposed Penguin, "my friend Riva has engraved on his memory the description which Moreau gave him of the place where the mine is to be found."

"Ah! that is not the same thing," said the sailor, disappointedly. "It would have been much better to have had something in writing, were it merely a bit of a tracing. The memory is fallible. But where is this famous mine to be found?"

"On the banks of the Murray," said Daniel, but he stopped at a sign from Penguin.

"That is not enough," persisted Dominique. "The Murray is very large, it is a river three or four times longer than the Rhone. I do not suppose you wish to follow it from its source to the sea to discover your mine."

"At this moment I cannot give you more precise information. You can come with us and I will point out the exact spot where we must commence operations."

Dominique saw that he would gain nothing by persisting, and so he continued,

"Money will be needed for all this, much money."

"It is in order that you may help in getting it that we have spoken to you."

"Very good. I have friends here and I will do what is necessary; but what will you give me in return?"

Daniel had not foreseen this question, and felt embarrassed. Penguin intervened.

"The treasure we are in quest of does not belong to us. Our intention is, after we have found it, to deliver it to the widow of Bastien Moreau."

Dominique's face assumed a smile of ironical pity; but suddenly rising, he took off with great gravity the old fur cap which had remained on his head, and bowing to our heroes, said,

"Gentlemen, all you intend to do in this matter is exceedingly correct. No one understands better than I do what is due to the widow and to the orphan. But I myself have in the Pyrenees an aged mother (she had been dead at least twenty years) for whom I have to work and save, and heroism on my part is forbidden by filial affection. And again, yesterday evening, in this very place, I refused to take part in a brilliant undertaking in which I was offered a quarter of the profits."

"What then?" asked Daniel.

"We are three," replied the sailor. "Let us divide the treasure into three equal parts, and you will do with your shares what seems best to you."

"Agreed!" said the Canadian.

"And again," majestically concluded Martigues, "I should like to draw the attention of Mr. Penguin, who does not yet know me, to the fact that, in order that he may appreciate my disinterestedness, I hereby present you beforehand with the money I shall have to disburse for expenses."

The business being thus settled, the three friends separated, Daniel absolutely enchanted, Penguin resolving to keep a careful watch on their new companion, and the latter in his turn thinking of every scheme by which he could safely possess himself of the whole outcome of the mine.

(To be continued.)

THE FIFTH FORM AT ST. DOMINIC'S:

A PUBLIC SCHOOL STORY.

BY THE AUTHOR OF "THE ADVENTURES OF A THREE GUINEA WATCH," ETC.

CHAPTER XXIII.—A TURN OF THE TIDE.

An earthquake could hardly have produced a greater shock than Oliver's strange conduct produced on the Fifth Form at St. Dominic's. For a moment or two they remained almost stupefied with astonishment, and then rose a sudden clamour of tongues on every hand.

"What can he mean?" exclaimed one.

"Mean! It's easy enough to see what he means," said another, "the hypocrite!"

"I should never have thought Greenfield senior went in for that sort of thing!"

"Went in for what sort of thing?" cried Wraysford, with pale face and in a perfect tremble.

"Why—cheating!" replied the other.

"You're a liar to say so!" shouted Wraysford, walking rapidly up to the speaker.

The other boys, however, intervened and held the indignant Wraysford back.

"I tell you you're a liar to say so," again he exclaimed. "He's not a cheat, I tell you, he never cheated. You're a pack of liars, all of you."

"I say, draw it mild, Wray, you know," interposed Pembury. "You needn't include me in your compliments."

Wraysford glared at him a moment and then coloured slightly.

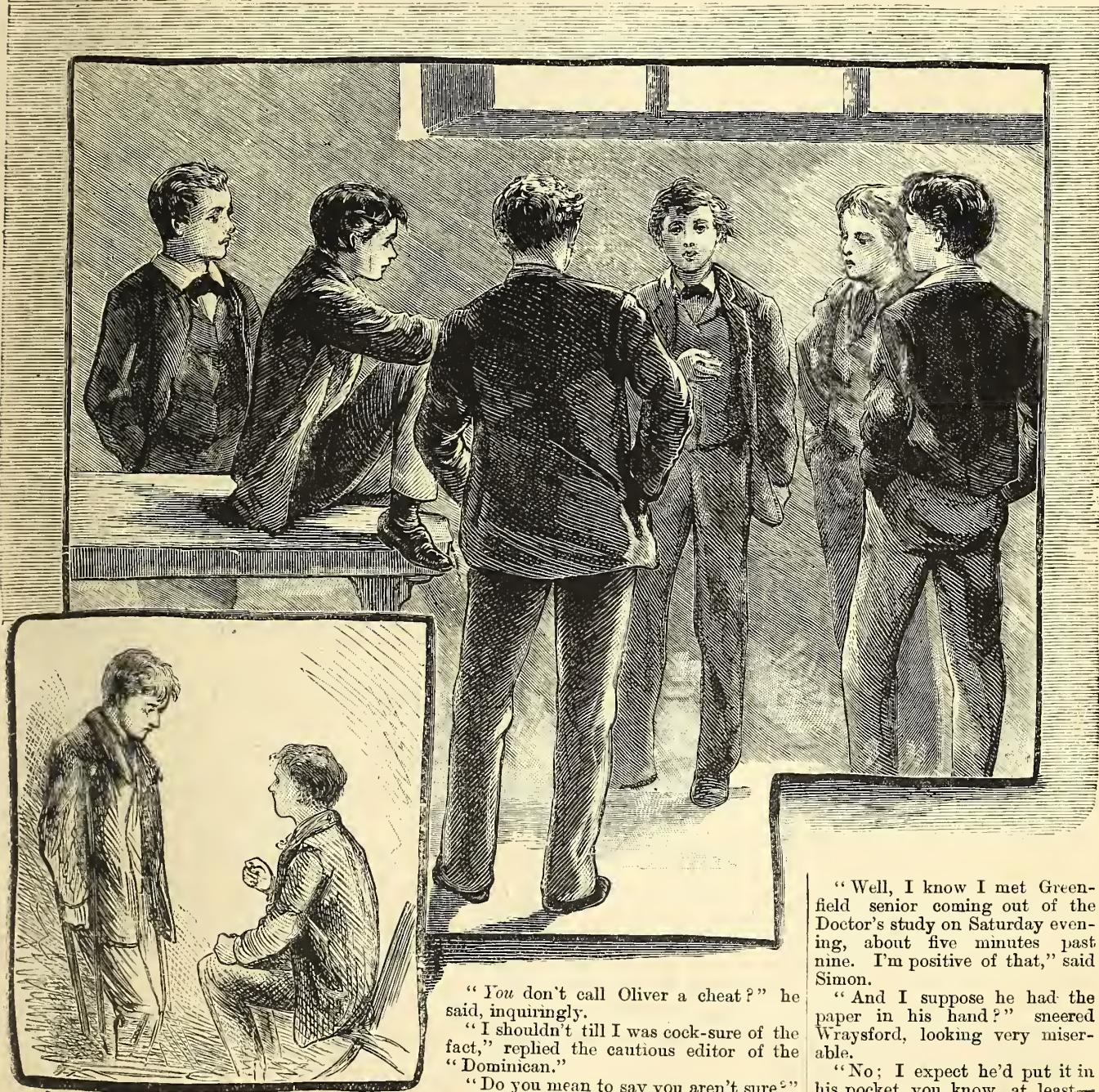
Pembury vouchsafed no answer, but whistled to himself.

"All I can say is," said Bullinger, who was one of Wraysford's chums, "it looks uncommonly ugly, if what Simon says is true."

"I don't believe a word that ass says."

"Oh, but," began Simon, with a most aggravating cheerfulness, "I assure you I'm not telling a lie, Wraysford; I'm sorry I said anything about it, I never thought there would be a row about it. I promise I'll not mention it to anybody."

"You blockhead! who cares for your promises! I don't believe you."



"You don't call Oliver a cheat?" he said, inquiringly.

"I shouldn't till I was cock-sure of the fact," replied the cautious editor of the "Dominican."

"Do you mean to say you aren't sure?" said Wraysford.

"Well, I know I met Greenfield senior coming out of the Doctor's study on Saturday evening, about five minutes past nine. I'm positive of that," said Simon.

"And I suppose he had the paper in his hand?" sneered Wraysford, looking very miserable.

"No; I expect he'd put it in his pocket, you know, at least—that is, I would have."

This candid admission on the part of the ingenuous poet was too much for the gravity of one or two of the Fifth. Wraysford, however, was in no laughing mood, and went off to his study in great perturbation.

He could not for a moment believe that his friend could be guilty of such a dishonourable act as stealing an examination paper, and his impulse was to go at once to Oliver's study and get the suspicions of the Fifth laid there and then. But the fear of seeming in the least degree to join in those suspicions kept him back. He tried to laugh the thing to scorn inwardly, and called himself a villain and a traitor twenty times for admitting even the shadow of a doubt into his own mind. Yet, as Wraysford sat that afternoon and brooded over his friend's new trouble, he became more and more uncomfortable.

When on a former occasion the fellows had called in question Oliver's courage, he had felt so sure, so very sure the suspicion was a groundless one, that he had never taken it seriously to heart. But somehow this affair was quite different. What possible object would Simon, for instance, have for telling a deliberate lie? and if it had been a lie, why should Oliver have betrayed such confusion on hearing it?

These were questions which, try all he would, Wraysford could not get out of his mind.

When Stephen presently came in, cheery as ever, and eager to hear how the examination had gone off, the elder boy felt an awkwardness in talking to him which he had never experienced before. As for Stephen, he put down the short embarrassed answers he received to Wraysford's own uneasiness as to the result of the examination. Little guessed the boy what was passing in the other's mind!

There was just one hope Wraysford clung to. That was that Oliver should come out anywhere but first in the result. If Loman, or Wraysford himself, were to win, no one would be able to say his friend had profited by a dishonourable act; indeed it would be as good as proof he had not taken the paper.

And yet Wraysford felt quite sick as he called to mind the unflagging manner in which Oliver had worked at his paper that morning, covering sheet upon sheet with his answers, and scarcely drawing in until time was up. It didn't look like losing, this.

He threw himself back in his chair in sheer misery.

"I would sooner have done the thing myself," groaned he to himself, "than Oliver." Then suddenly he added,

"But it's not true! I'm certain of it! He couldn't do it! I'll never believe it of him!"

Poor Wraysford! It was easier to say the generous words than feel them.

Pembury looked in presently with a face far more serious and overcast than he usually wore.

"I say, Wray," said he, in troubled tones, "I'm regularly floored by all this. Do you believe it?"

"No, I don't," replied Wraysford, but so sadly and hesitatingly that had he at once confessed he did, he could not have expressed his meaning more plainly.

"I'd give anything to be sure it was all a lie," said Pembury, "and so would a lot of the fellows. As for that fool Simon—"

"Bah!" exclaimed Wraysford, fiercely, "the fellow ought to be kicked round the school."

"He's getting on that way already, I fancy," said Pembury. "I was saying I'd think nothing at all about it if what he says was the only thing to go by, but—well, you saw what a state Greenfield got into about it?"

"Maybe he was just in a rage with the fellow for thinking of such a thing," said Wraysford.

"It looked like something more than rage," said Pembury, dismal, "something a good deal more."

Wraysford said nothing, but fidgeted in his chair.

A long silence followed, each busy with his own thoughts and both yearning for any sign of hope.

"I don't see what good it could have done him if he did take the paper. He'd have no time to cram it up yesterday. He was out with you, wasn't he, all the afternoon?"

"No," said Wraysford, not looking up, "he had a headache and stayed in."

Pembury gave a low whistle of dismay.

"I say, Wray," said he, presently, "it really does look bad, don't you think so yourself?"

"I don't know what to think," said Wraysford, with a groan; "I'm quite bewildered."

"It's no use pretending not to see what's as plain as daylight," said Pembury, as he turned and hobbled away.

The Fifth meanwhile had been holding a sort of court-martial on the affair.

Simon was made to repeat his story once more, and stuck to it too, in spite of all the brow-beating he got.

"What makes you so sure of the exact time?" asked one of his inquisitors.

"Oh, because, you know, I wanted to get off a letter by the post, and thought I was in time till I saw the clock opposite the Doctor's study said five minutes past."

"Did Greenfield say anything to you when he saw you?" some one else asked.

"Oh yes, he asked me if I knew where the Doctor was."

"Did you tell him?"

"Oh yes, I said he'd gone down to the hall or somewhere."

"And did Greenfield go after him?"

"Oh no, you know, he went off the other way as quick as he could," said Simon, in a voice as though he would say, "How can you ask such an absurd question?"

"Did you ask him what he wanted in the study?"

"Oh yes; but of course he didn't tell me—not likely. But I say, I suppose we're sure to win the 'Nightingale' now, aren't we? Mind I'm not going to tell anybody, because of course it's a secret."

"Shut up, you miserable blockhead, unless you want to be kicked," shouted Bullinger. "No one wants to know what you're going to do. You've done mischief enough already."

"Oh, well, I didn't mean, you know," said the poet; "all I said was I met him coming—"

"Shut up, do you hear? or you'll catch it!" once more exclaimed Bullinger. The wretched Simon gave up further attempts to explain himself.

Still what he had said, in his blundering way, had been quite enough.

The thing was beyond a doubt; and as the Fifth sat there in judgment, a sense of shame and humiliation came over them, to which many of them were unused.

"I know this," said Ricketts, giving utterance to what was passing in the minds of nearly all his classfellows, "I'd sooner

have lost the scholarship twenty times over than win it like this."

"Precious fine glory it will be if we do get it," said Braddy.

"Unless Wray wins," suggested Ricketts.

"No such luck as that, I'm afraid," said Bullinger. "That's just the worst of it. He's not only disgraced us, but he's swindled his best friend. It's a blackguard shame!" added he, fiercely.

"At any rate, Loman is out of it, from what I hear; he got regularly stuck in the exam."

"I tell you," said Ricketts, "I'd sooner have had Loman take the scholarship and our two men nowhere at all, than this."

There was nothing more than this to be said, assuredly, to prove the disgust of the Fifth at the conduct of their classfellow!

"I suppose Greenfield will have the grace to confess it, now it's all come out," said Ricketts.

"If he doesn't I fancy we can promise him a pretty hot time of it among us," said Braddy.

One or two laughed at this, but to most of those present the matter was past a joke.

For it must be said of the Dominicans—and I think it may be said of a good many English public schoolboys besides—that however foolish they may have been in other respects, however riotous, however jealous of one another, however well satisfied with themselves, a point of honour was a point which they all took seriously to heart. They could forgive a schoolfellow for doing a disobedient act sometimes, or even a vicious act, but a cowardly or dishonourable action was a thing which nothing would excuse, and which they felt not only a disgrace to the boy perpetrating it, but a disgrace put upon themselves.

Had Oliver been the most popular boy in the school it would have been all the same. As it was, he was a long way from being the most popular. He never took any pains to win the good opinion of his fellows. When, by means of some achievement in which he excelled, he had contrived (as in the case of the cricket match last term) to bring glory on his school and to make himself a hero in the eyes of St. Dominic's, he had been wont to take the applause bestowed on him with the utmost indifference, which some might even construe into contempt. And in precisely the same spirit would he take the displeasure which he now and then managed to incur.

Boys don't like this. It irritates them to see their praise or blame made little of; and for this reason, if for no other, Oliver would hardly have been a favourite.

But there was another reason. Now that the Fifth found their faith in Greenfield senior rudely dashed to the ground, they were not slow to recall the unpleasant incidents of last term, when, by refusing to thrash Loman, he had discredited the whole Form, and laid himself under the suspicion of cowardice.

Most of the fellows had at the time of the Nightingale examination either forgotten, or forgiven, or repented of their suspicions, and indeed by his challenge to Loman the previous Saturday Oliver had been considered quite to have redeemed his reputation in this respect. But now it all came up again. A fellow who could do a cowardly deed at one time could do a mean one at another. If one was natural to his character, so was the other, and in fact one explained the other. He was mean when he showed himself a coward last term. He was a coward when he did a mean act this term.

What wonder if the Fifth felt sore, very sore indeed, on the subject of Oliver Greenfield?

To every one's relief, he did not put in an appearance again that day. He kept his study, and Paul brought down word at prayer time that he had a headache and had gone to bed.

At this the Fifth smiled grimly and said nothing.

Next morning, however, Oliver turned up as usual in his place. He looked pale, but otherwise unconcerned, and those who looked for traces of shame and self-abasement in his face were sorely disappointed.

He surely must have known or guessed the resolution the Fifth had come to with regard to him; but from his unabashed manner he was evidently determined not to take it for granted till the hint should be given pretty clearly.

On Ricketts, whose desk was next to that of Oliver, fell the task of first giving this hint.

"How did you get on yesterday in the English Literature?" asked Oliver.

Ricketts's only answer was to turn his back and begin to talk to his other neighbour.

Those who were watching this incident noticed a sudden flush on Oliver's cheek as he stared for an instant at his late friend. Then with an effort he seemed to recover himself.

He did not, however, attempt any further conversation either with Ricketts or his other neighbour Braddy, who in a most marked manner had moved as far as possible away from him. On the contrary, he coolly availed himself of the extra room on the desk and busied himself silently with the lessons for the day.

But he now and then looked furtively up in the direction of Wraysford, who was seated at an opposite desk. The eyes of the two friends met now and then, and when they did each seemed greatly embarrassed. For Wraysford, after a night's heart-searching, had come to the determination not after all to cut his friend; and yet he found it impossible to feel and behave towards him as formerly. He tried very hard not to appear constrained, but the more he tried, the more embarrassed he felt. After class he purposely walked across the room to meet his old chum.

"How are you?" he said, in a forced tone and manner utterly unlike his old self.

It was a ridiculous and feeble remark to make, and it would have been far better had he said nothing. Oliver stared at him for a moment in a perplexed way, and then without answering the question walked somewhere else.

Wraysford was quite conscious of his own mistake; still it hurt him sorely that his well-meant effort should be thus summarily thrust aside without a word. For the first time in his life he felt a sense of resentment against his old friend, the beginning of a gap which was destined to become wider as time went on.

The only person in the room who did meet Oliver on natural ground was the poetic Simon. To him Oliver walked up and said, quietly,

"I beg your pardon for hitting you yesterday."

"Oh," said Simon, with a giggle. "Oh, it's all right, Greenfield, you know, I never meant to let it out. It'll soon get hushed up; I don't intend to let it go a bit farther."

The poet was too much carried away by

the enthusiasm of his own magnanimity to observe that he was in imminent risk, during the delivery of this speech, of another blow a good deal more startling

than that of yesterday. When he concluded, he found Oliver had left him to himself and quitted the room.

(To be continued.)

OUR NOTE BOOK.



WAS talking to a clergyman the other evening, and knowing that he was an old Rugbeian I asked him how he liked the first day at school. "I confess I didn't mind the day," he replied, "but the night was a different matter. You see I had been brought up in a religious family, and naturally I knelt down to say my prayers before getting into bed. I was rather surprised that they all were so quiet, as I quite anticipated some amount of jeering. But when I got up I saw that they all had their towels knotted, and my punishment for praying was to run the gauntlet—no joke, I can tell you. After that the praepostor took me in hand and thrashed me on his own account; the boys then took down the chimney-board and shut me in behind it, and there I had to stay all night. It's a mercy it didn't kill me. This was in the first year of Dr. Arnold's reign; things softened down a good deal before I left."

A short time after hearing this account of the dastardly cruelty of boys, I fell in with an Eton boy, and asked him if the crime of praying was visited severely in his house. "Not a bit of it," he answered; "there's a bell rings when you get upstairs, and every fellow's got to kneel down for a minute or two, and you mustn't speak; so if any one wants to say his prayers he isn't disturbed. Why, after Moody and Sankey came here they actually started a prayer-meeting, and some of the best fellows went to it."

Yes, things are changed nowadays; it is not the sign of a milk-sop to refuse to swear or to kneel down to pray. The best athlete I ever knew, an Oxford man, who won more events at the Inter-University sports than any other of his year, is now a clergyman in the West of England; and the best all-round man at the school I used to be at—good at cricket, football, hockey, everything—is now a missionary.

PAUL BLAKE.

A HERO ALL OVER.—It is not often that police-courts witness such an inspiring sight as the one at Ashton-under-Lyne has just been the scene of. Only the presentation of the Humane Society's medal by the mayor to a boy, but for conduct well worthy of the Victoria Cross. Edward Wilcox, who is only fifteen years of age, and small for that, one night heard a cry of distress coming from the direction of a canal in the vicinity of the house where he lived. He waited for no more, but jumped out of bed, put on his trousers and clogs, and hurried to the spot, where he found a woman drowning in the water, with two men on the bank coolly watching her struggles. Throwing

off his clothes, he jumped in, swam to the poor creature, cleverly turned her over on her back, and somehow got her to the bank, where she was pulled out. But his presence of mind and Good-Samaritanship did not stop even there. The half-drowned woman was wet, cold, and miserable; the bed he had left was warm, dry, and cosey; she therefore, he determined, should become its tenant until she was sufficiently recovered to be taken to the police-station for attempting to commit suicide. As for himself, the wetting did not much matter, and for the rest of it, he "had only done his duty." We are proud to number such lads as this amongst the readers of the Boy's Own.

A BOY'S REBUKE.—In the neighbourhood of Hoddom Castle, Dumfriesshire, Scotland, there was once a tower called the "Tower of Repentance." What gave the tower its name we are not told, but it is said that an English baronet, walking near the castle, saw a shepherd lad lying upon the ground, reading attentively. "What are you reading, lad?" "The Bible, sir." "The Bible, indeed!" laughed the gentleman; "then you must be wiser than the person. Can you tell me the way to heaven?" "Yes, sir, I can," replied the boy, in no way embarrassed by the mocking tone of the other; "you must go straight by way of yonder tower, and then keep to the right." The gentleman saw that the boy had learned right well the lesson of his book.

ROYAL NAVY, 1882.—There are, it seems, in commission, building, or unappropriated, 415 ships of war, with 2,567 guns, aggregate burthen of 1,014,535 tons, and steam power equal to that of 710,495 horses. In addition to these there is a list of 33 "small steam vessels, employed in Harbour Service," with burthen of 11,028 tons, and 11,100 horse power, with only 2 guns amongst them; another under the head of "Harbour Service," of 132 vessels, nearly all of them sailing ships (of which the tonnage is not stated), but including the following screw armour-plated ships—Caledonia, Enterprise, Favourite, Lord Clyde, Ocean, Pallas, Persicus, Prince Consort, Research, Royal Alfred, Royal Oak, Royal Sovereign, and Zealous, all of them described as "unappropriated," but which are named in the general list. Of the rest, 30 are used as coal depots, 13 as receiving ships and hulks, 19 as training and school ships, 5 as church, chapel, and mission ships, and the rest for other purposes. We have totals of 626 vessels, of 1,029,443 tons burthen, with 2,569 guns, and steam power equivalent to that of 721,595 horses.

CRAMMED FOR AN EXAMINATION.—"How came you to fail in your examination?" asked a tutor of one of his pupils. "I thought I crammed you thoroughly." "Well, you see," replied the student, "the fact was you crammed me so tight I couldn't get it out."

TAMING BABOONS.

BY MRS. CAREY-HOBSON.

"WHAT'S in the wind now, I wonder?" said Charlie Puckeridge, taking a sudden leap from the "kartel," or hanging bed, to the chest on which sat the Hottentot leader of the bullock-waggon in which he and his mother were travelling up-country in the Transvaal, South Africa.

The cause of the exclamation had been the sudden swerving of the whole "span," or team,

very picture of propriety; but if he was quiet his eyes were not, they were constantly on the look-out for something good to turn up. In front of the house there were some mats raised from the ground on a kind of frame, and on these the farmer's wife was carefully drying some figs and peaches for winter use. They were temptingly near to Jacko. One hand went up, and in a moment, as quick as thought, his cheeks were so distended that he must at least have had two or three figs or quarters of peach in each, though looking as grave as if he had not moved an inch from his post.



of oxen from the road, thereby threatening to upset the waggon.

Piet, the leader, was off like a shot, and managed, just in time, to turn the bullocks back.

"Hullo! Mater! Here's a rum go; do come and look at this gulphus swell of a groom. Wouldn't he cut a dash in the Row, just?"

"My dear boy!" remonstrated Mrs. Puckeridge, as she came to the front; "your slang is decidedly objectionable. Why! Good gracious me! No wonder the cattle shied at the creature. What is it?"

"The latest invention in the way of after-riders," said Jem Mastick, a young farmer, who was walking, long whip in hand, to the right of the waggon.

They were drawing near to a Dutch farmhouse after a long morning's trek, or travel, and the subject of all this excitement was a good-sized baboon, which, perched up on all-fours on the back of a powerful horse, with a woolly sheepskin for a saddle, was following an old Dutch Boer in the capacity of groom.

"Poor Jacko!" said Charlie; "he looks as if he were in an awful funk up there, and I do believe the horse will have him off. He jumps about as if he didn't half like his rider."

"I don't suppose he does," said Jem Mastick, "but he won't get him off in a hurry, for those fellows can stick on to anything like grim death. Ha-ha now!" he called out to his oxen, and they all immediately obeyed his voice by standing quite still, and as he and Charlie walked towards the house they saw the old Boer alight from his horse, the baboon at the same moment springing to the ground, most dexterously avoiding the heels of the horse, which were struck out with wicked intent of doing him bodily harm.

"Now what's he going to do, I wonder?" said the boy.

"Well, if he acts his part, he ought to go and hold his master's horse."

No sooner said than done—the old Boer allowed the bridle of his horse to hang on the ground, and the baboon immediately sat upon it.

"Will not your servant 'off-saddle'?" said the master of the house, with a merry twinkle in his eye, as he also welcomed his English visitors, Mrs. Puckeridge included.

Charlie was too much interested by the baboon to stay in the house with his mother, so he returned to the waggon, from which the oxen were being loosened and driven off to graze. He was amused by the staid and quiet manner in which the creature sat bolt upright. As long as he thought himself watched he looked the

He turned it round and round, smelt it, and at last put it down on the ground. Evidently he had never seen loaf-sugar before.

"Why, you stupid baboon!" cried Charlie; "you don't know what's good!"

"He's never heard English before any more than he's seen lump-sugar, I'll be bound," said Jem, who had just come up. "If it had been a piece of sugar-candy—or 'thé-zuiker,' as the Dutch ladies call it—he'd know what it was fast enough;" and then, taking the other lump from Charlie, he said to the baboon, in Dutch, "Look here! Eat, Maar!" biting off a piece and giving Jacko the remainder.

The baboon watched him till he had swallowed the piece he had taken, and then tried his own. He soon showed his appreciation of it by quickly taking up the piece he had put aside.

"Now do you suppose that fellow understood the Dutch you spoke to him?"

"Well, you see, he knew what I meant by the action," said Jem; "but there's no denying that they do understand a great deal, and the familiarity of the sound would, of course, have much to do with it. The Bushmen have a notion that the baboons could talk if they liked, but that, being afraid that the Boers would make slaves of them, they hold their tongues."

"Queer creatures!"

"Which—the Bushmen or the baboons?"

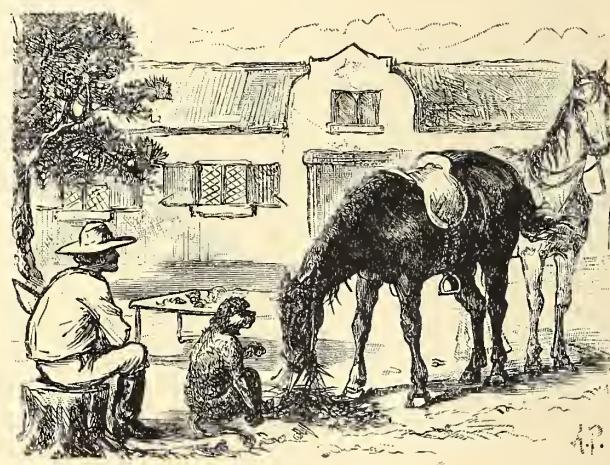
"Oh! both. They're much of a muchness, I think."

"The poor little Bushmen haven't any tails, you know, though I'll acknowledge there's not much to choose between the two. I have two baboons at my farm, so you'll be able to study their propensities while you are there if you like."

"That'll be awfully jolly! I like this old fellow, though I don't think his morals have been attended to, or he wouldn't have taken those figs on the sly."

"My baboons haven't been taught at all, and one of them especially is so wicked and full of mischief that I have often threatened to shoot him. But somehow I can't bear to kill a baboon; they look so awfully humanlike when they are dying."

(To be continued.)



Just then the old Boer and his host were heard coming towards the door. This was too much for Jacko's fears; his hand went into his cheek, and the fruit he had so vainly endeavoured to dispose of he popped down upon the ground and sat upon, looking at once as demure as a mouse, though Charlie afterwards declared he saw real tears of sorrow in his eyes.

His master brought him a wineglassful of syrup and water, in order that he might show all the company how well he could drink their healths, which he did with great gusto, nodding his head and showing his teeth as he grinned, creating much amusement.

Charlie then gave him the apple, which he greatly enjoyed, especially the core, but a lump of white sugar he looked at very suspiciously.

BALLOONS AND ALL ABOUT THEM.

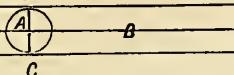
BY A PROFESSIONAL AERONAUT AND BALLOON-MAKER.

PART IV.

IN making a balloon the first thing to be done is to take into consideration how many gores, or strips, will be required to form a balloon of any given diameter. For instance, if a balloon be required of the circumference of three feet, there will be twelve gores, each eighteen inches in length (that being half the circumference), and three inches in width at the equator, but tapering at each extremity, as will be hereafter described. Now divide the paper of the

pattern gore into four equal parts, and then describe a circle in the centre (Fig. 1).

Fig. 1



Divide one quadrant of the circle into any given number of parts—say seventeen. Then drop perpendiculars parallel with line C from each point of the divisions, intersecting line B in the quadrant. Now divide line B from centre of circle to end of pattern in seventeen equal parts, and raise perpendiculars from each point of divisions, thus (Fig. 2):—

Fig. 2



Now draw horizontal lines, or measure off with compasses from each point of division in the quadrant, cutting or intersecting the seventeen corresponding lines as shown, and with a free hand, or by the aid of a French curve, connect all these points together, as shown in Fig. 3.

Fig. 3



Having now got a quarter of the pattern, it must be cut round, as shown above, and transferred to the three other quarters, marked respectively in the figure A, B, C, which will be the pattern for a sphere. This is technically known as striking out a pattern gore by an intersection of lines, and this is quite near enough for the paper balloons, on which you must practise until you are sufficiently advanced in the science to enable you to begin on the proper material. There is another method which is still more accurate, in fact, will ensure absolute mathematical correctness, and that is by a calculation of a series of decimals corresponding with each of the seventeen perpendicular lines shown beneath (Fig. 4).

Fig. 4

0.08716
0.17365
0.25882
0.34202
0.42262
0.5
0.57358
0.64279
0.70711
0.76604
0.81915
0.86603
0.90631
0.93969
0.96593
0.98481
0.99619

Suppose, for example, that the diameter of the balloon to be constructed is 20 ft., and that it is required to make it of 12 pieces; then, in order to draw the pattern for those pieces, find the circumference of the balloon, which is 62·83 ft., and, dividing it by 4, the quotient is 15·7 ft. Make, therefore, A D equal to 15·7 ft., and D E likewise of the same length. Divide the circumference, 62·83 ft., by 24, which is double the number of pieces that are to form the balloon, and the quotient, 2·618 ft., is the length of D C, and likewise of B D, so that B C is equal to 5·236 ft. Then, having divided the line A D into 18 equal parts, and having drawn the parallel lines from those points of division, find the length of each of those lines by multiplying 2·618 by the decimals annexed to that line. Thus 2·618, multiplied by 0.99619, gives 2·608 ft. for the length of f g, and, again multiplying 2·618 by 0.98481, the result gives 2·578 ft. for the length of h i, and so of the rest. In cutting the pieces after such a pattern, care should be taken to leave them about three-quarters of an inch all round wider than the pattern, which will be taken up by the seams; and the same rule must be borne in mind whether you are experimenting upon paper patterns, or upon the materials required for a large balloon. Fig. 4 will illustrate the foregoing instruction, and those who like to take the trouble to prove the sum will take all the more interest in the manufacture of their balloon.

These decimals have been calculated by a mathematician, and are available for any sized balloon.

Now we come to the neck, the pattern of which may be drawn with a free hand, and may be left to your own fancy, with this proviso—that the length ought not to exceed more than one-fifth of the whole length of the pattern. In

Fig. 5 you will see what the neck should be, the dotted line showing the spherical portion of the pattern gore.

Small gas-balloons are generally made of tissue-paper, varnished over with boiled oil, which gives them a very transparent and skin-like effect. Sometimes gold-beater's skin is used, but it is very expensive, and paper answers the same purpose. Supposing that you are about to begin upon a paper balloon, the first thing to be done, before making your pattern gore, is of course to select your paper. Ordinary tissue is manufactured from the size of 20 x 30 inches square. There are other sizes made, of a stronger quality, suitable for larger balloons than that of three feet circumference, upon which I recommend you to practise, as this is a handy size, while the above-sized paper—obtainable everywhere—cuts in well for the width to make the pattern gore, though, for length, you will have, probably, to paste two sheets together.

When you have a sufficient number of lengths ready for cutting out, place them, one on the top of another, on a flat board; then place the pattern gore on the top, and, with a sharp knife or razor, cut the whole out at once, taking care not to cut the pattern gore. You will do well also to place a few weights on the top to keep the whole lot in place. After you have cut one edge, move your pattern about a quarter of an inch away from the edge that is cut. This is to allow for the "lap," as it is called, whether in pasting a small balloon or sewing a large one, for bringing the gores together in case you have not made such allowance on the pattern. In pasting—in the case of paper balloons, or sewing in the case of larger balloons—together you should take care, for the sake of effect, to do so in alternate colours. Red and white, yellow and white, green and black, all make effective contrasts, but these minor details may be safely left to your own taste. Paste them, first in pairs, then in fours, etc., in the following man-

ner. Having provided yourself with a large, smooth pasteboard, begin by laying upon it a white gore, and then place carefully over it a coloured one, showing the "lap" on the one underneath to allow for the folding. You can do this by carefully manipulating the gores with the fingers, or, still better, by the means of a pallet or any other flat knife. Then, with a "dabber," as it is technically termed—a clean duster will answer the purpose—press down the overlapping seam the whole length, and immediately hang it up to dry, and proceed to do the same thing with the others, never attempting to paste others together until the first are perfectly secure by drying. A little alum should be put into the paste you are using for the purpose.

When you have pasted all the gores together, *and they are quite dry*, blow the balloon out with a pair of bellows through the neck. You will find at the top, where all the points of the gores meet, a small hole, which will let out the air with which you have filled your balloon, and *à fortiori*, the gas with which it will have to be filled presently, the gas being lighter than the air, and so more anxious to make its escape from its imprisonment. At all events this is very probable, even in the most carefully and scientifically constructed balloons. To obviate this fatal mistake, therefore, you must cut a round piece of paper, which is called the cap, answering to the valve in a real balloon, and carefully paste it over the meeting-places of the various gores. For you must bear in mind that a balloon is not a balloon at all unless it be perfectly air-tight.

Now let out the air by gentle pressure, and fold up the balloon, gore over gore, and commence the varnishing, which is laid on as thinly as possible with a small piece of flannel. The varnish used is simply boiled oil, which can be obtained from any oil and colour shop. After you have carefully varnished the whole of the gores, blow the balloon out again, and hang it up by the neck until it is dry, a process which will take about twelve hours.

The material used in the construction of balloons for carrying passengers is Scotch cambric—not silk, as is erroneously supposed. Silk has not been largely used in the manufacture of balloons for the last forty years. And I need hardly say that it is not pasted, as in a paper balloon, but sewn with double rows of stitches, and varnished exactly in the same manner as I have already described.

(To be continued.)



"COMING EVENTS CAST SHADOWS BEFORE."

Luggage? Of course! You can put those things over there in the break; I'll take these into the carriage with me.

GOATS AND GOAT-KEEPING,
FOR PLEASURE OR PROFIT.
BY A PROFESSIONAL JUDGE.

PART IV.—FOOD AND FEEDING—THE MANAGEMENT OF THE DAIRY—PREPARING GOATS' SKINS FOR MATS, ETC.—THE GOAT IN HARNESSES—THE COMMONER AILMENTS OF THE GOAT.

I HAVE now to say a few words on the proper food and the feeding of the goat. The animal is not at all particular as to what she does eat, although there are times when she may appear fastidious and dainty. Feeding a goat in the country is a matter of very great ease, as you can always get a bit of rough grass-land to tether her on. Or if you have a paddock so much the better; you can keep her there as long as there is anything green to eat. It must be remembered, though, that goats in a civilised district must not have all the freedom they want to, for if they manage to get into garden or orchard, the mischief done is very considerable in a very short space of time.

They must be either hobbled or tethered. By hobbling I mean attaching a piece of rope between one fore leg and the hind leg on the same side, so as to prevent their pedal progression being anything else save a walk. The common plan is to tether them, just as a cow is tethered, the tethering-pin, or "bakey," as they call it in Scotland, being a piece of strong iron like a marlinspike, with a ring on the top of it. It should be driven well home into the ground, else the rope, which must be a pretty strong one, will get coiled round the top of the "bakey." The tethering-rope should be from fifteen to twenty feet long, according to space, and attached by a swivel spring hook to the ring of the collar.

If the goat has an enclosed meadow where it can roam, it need not be tethered, only what is called a puzzle-collar must be worn. This is composed of three pieces of cane or wood in the form of a triangle with protruding ends, placed round the neck. Each piece of cane is about two and a half feet long, so that the capricious wearer finds it impossible to break through either fence or hedge.

If you live in a town or village, where your goat cannot get out into the fields to eat grass and pull herbage, then she must of course have her food indoors. Now it would become expensive to keep on buying corn and hay for her, and besides there is no such necessity, for, if you have a garden, very little of those dear commodities will be required. If you have not, beg refuse stuff from your neighbours, potato-parings, refuse cabbage and greens, pea or bean haulm, and garden stuff generally. Apple-parings and a variety of weeds, with the cuttings of hedgerows, etc., and furze and thistles, all come in handy. Do not be ashamed to forage well for your favourite. It is a capital plan to gather the weeds and everything apparently, edible by the hedge-sides or ditches, and store them up for winter use. What is not eaten will do for bedding. Choose dry days for doing this, and if you are too proud to wheel a barrow yourself, a copper or two will enlist the services of the first hungry-looking boy you meet.

And here I must give a hint which you will do well to remember. Goats are often attacked by diarrhoea, which may lead on to dysentery and death, and one prolific cause of this is giving green stuff or kitchen refuse, such as potato, turnip, or apple parings, that has turned sour and begun to ferment. Let all such food as this, then, be given fresh, for the digestive organs of a goat are certainly not so strong as those of a pig.

It will be well to have a locked box—which you can easily make yourself—to contain oats in one compartment and bran in another, or a mixture of oats and barley and maize. In the country, acorns, beech nuts, etc., can be collected in the season or bought from children, who gather them for the sake of the few pence they bring in. It is a good plan to store these in

your oat-box, but let them be put in when dry or they will heat and rot. The quantity of food to give your milch goat will be determined by the amount of her appetite. As long as she eats heartily, treat her handsomely; if she begins to nose over her food, and pick out the tit-bits, take it away, or she will only spoil it.

Upon the quality of the food you give her will depend the quality of the milk. She ought to have three meals a day, a morning and evening meal consisting of hay chopped or clipped up, mixed with about half the quantity of oats, maize, barley, etc., and probably a little bran. Or chaff may be given now and then instead of hay. At noon a good feed of kitchen refuse is the correct thing to place in her trough. Feed with regularity day by day.

Goats, on the other hand, that are at liberty in a field or common all day, will not want the midday meal, but some nice dry food should always be waiting them on their return home in the gloaming.

Three times every day you must give the goat water. Let the water be clean and fresh, but do not leave it long beside her. Empty it out after she has had a drink.

Salt in small quantities is sometimes mixed with the food of the goat. Salt is an essential of digestion, more especially to goats that are kept constantly within doors. Those who roam in the wilds, as Welsh goats do, eat many different kinds of herbs, which no doubt supply the want of salt. Instead of mixing a little salt with the food, it is a better plan to place a large lump of rock salt in the stall in front of them, that they may lick when they have a mind to.

(To be continued.)

RUGBY FOOTBALL, AND HOW TO EXCEL IN IT.

BY DR. IRVINE, THE SCOTTISH CAPTAIN.

PART XVI.

To Backs.—Keep back. Look upon the ball as an enemy which must never take you in the flank or rear. Your chief duties are to safely dispose of ball or opponent whenever one or other comes upon you, and to touch-down behind your own goal. Never be tackled with the ball. Always get your drop into touch near your own goal. As a rule drop at the enemy's goal in their half of their ground. You must be a very sure tackler, and always go for the ball, for if you tackle the man, and the ball is chucked at once, your labour has been in vain. Do not be over-confident, and come too far forward in the enemy's country. Do not be too funky, and come too far forward in your own territory. Keep cool, and keep back, and there is no fear of you.

To Three-quarter-Bucks.—The back's motto might be called "Defence." Your motto is "Defence and Defiance." I cannot categorically say what you should do and should not do. You have running to do and tackling to do; you have to drop at goal and drop into touch; you have to help your half-backs and to play into and out of their hands; you have also to be ready to fall back to the relief of a back in distress. Always prefer dropping at goal to trying to run in when your chances of doing one or the other seem about equal. Be always on the alert to chuck and be chucked to. You occupy the swagger place. You have glorious chances. You have also sore temptations to "gallery-play." Do not yield to them; always try and get your drop or chuck before you are fairly held. Do not come prowling in among the halfs, and so spoil their game. Try, and I say this to backs as well, to play in a clean style. Do not fumble with the ball in picking it up; do not "butter" the ball when it flies to you. Do not stand and think what to do when you get it. "Stand not on the order of your going, but go at once." Be prompt, be clean and wide awake, and sticky-fingered, both as regards ball and men, and forget that there is a

crowd looking at you, and you will do your duty at three-quarter-back.

To Half-Backs.—Your place is just outside the flanks of the "scrummage." It is not in the scrummage, nor is it in the loose scrummage, picking up the ball when you should leave it for your forwards to carry on. You should watch outside the tight scrummage; shout to your forwards which side to shove to; if the ball comes clear out to you be off round the back of your forwards, and ten to one you are past your opposing half-back before he knows where he is. Do not be caught picking the ball out from the sides of a scrummage; rather drive it in again. If the opposite forwards come through with the ball, drop on it and hang on like grim death, unless you have time to get away. Chucking in those circumstances is dangerous. You have any amount of chances—to drop at goal, to send the ball into touch, to run, to chuck to your backs, to stop rushes, to charge your opposing half-back. The peculiarity of your work is that all your proceedings have to be done quickly and cleverly. Your drop at goal is usually a quick little drop out of a crowd, your kick into touch the same. Act jackal to your three-quarter-backs, especially near the opposite goal. Be prepared for any amount of knocking about, for if you do your duty you will assuredly get it. You occupy just about the most important position on the field, and no man gets so much and such constant work to do. Also, no man can be a greater bugbear than a greedy half-back. Do not, as I have often seen, think that you can play the whole match yourselves. Leave the forwards especially to do their work. In estimating the formidableness (to coin a word) of a team, one of the first things considered is, what sort of half-backs have they? A half-back should be fairly heavy, tough, and hard to kill, and should drop with either foot.

To Forwards.—Were I to begin laying down the law to forwards I should not know when to stop. I think most of their work has been told them already. Play together, and always on the ball, and there is the beginning and the end of the matter. Prefer using your feet to using your hands, but do not ride this hobby to death. You get many fine chances—to pick up and run, to drop at goal, and to pass. Always be on the outlook for chances to do this, but at the same time your true game is together, playing the ball with your feet. No man is too light and thin to be a first-rate forward. No man is too heavy and muscular to be a rascally bad one. Hard, unflinching, untiring, often unseen work, that is your lot, and if you do it conscientiously you will certainly be a good forward.

One word to Captain, Umpires, and Referee.

To Captain.—Try as much as possible to do without umpires and referee. In private life sensible men prefer private arrangement to appealing to the law-courts. So it should be in football. Where there are cool, firm, and competent captains, you often see a match played through and the duties of umpires and referee merely nominal. A captain should know his own mind, and speak it firmly. He should also know his men's play, and their pluck, and general moral character and temper. He should not be always putting in his ear, telling backs what sides they are to play on, and so on. He should leave matters which men can settle best among themselves for themselves to settle. He has often unpleasant things to do, such as selecting his team from a lot of men who are all anxious to play, and each thinks he is good enough to be in the team, and especially unpleasant it is when he has to shift men out of his team to make way for new comers who are better. Let him be strictly impartial, taking men purely on their merits, but always giving the benefit of the doubt to the man already in the team, and let him make his men see that he is strictly impartial; and let him be quite firm, candid, and good-natured about it, and he will have the confidence of all and offend none, unless some selfish or conceited fellow, whom he need not mind offending. Should a captain be in or behind the scrummage? This is often discussed. I do not think it matters two straws.

He can see some things better forward, and others better behind. He can see everything from nowhere, and something from anywhere, and therefore it does not much matter where he is. *Who he is* is the important point.

Umpires should be impartial, decided, cool-headed, and should know the game, and be on the outlook for the "ways that are dark, and the tricks that are vain." They should be thorough practical players, not, as is often the case, enthusiastic admirers of the game who have never played much, or who have so long done with playing that the game has become quite new to them. Should umpires speak unless appealed to? Most decidedly they should. I know many do not agree with this; but if there are rules of football, surely the very essence

of umpiring is to enforce them. The rules do not say, "A man is off-side if he does so-and-so, and is seen by one of the opposite side doing it." I shall not in the case of football, any more than in the case of anything else, accept the dictum that transgression consists not in doing the deed, but in being found out. Umpires should always try to come to a decision. Their *yes* should be decided, so should their *no*, and so should their *I don't know*, but the seldomer that is heard the better.

The Referee should not speak unless appealed to. That is self-evident. He has to decide where the umpires either differ or did not see the point. Where one umpire saw the point, and the other did not, is the referee to be appealed to, or is the opinion of the umpire who saw to

be taken as conclusive, and the ignorance of the other to be taken as equivalent to consent? That is a nice point, and I have no time to argue it here. I should say it were better to take the latter view of it, and let the referee alone; for if the referee were to differ from the umpire who saw the point, there would be a deadlock. Far better, however, than having two umpires and a referee, have one referee, who shall decide where the captains cannot agree. It would save time, it would save much bad blood, and often nasty imputations of bias, which under the present system of an umpire for each club, and the referee nominated by the home club (though agreed to by the other), one too often hears.

(To be concluded.)

THE ILL-USED BOY; OR, LAWRENCE HARTLEY'S GRIEVANCES.

CHAPTER XXVIII.—HOW LAWRENCE GAVE THE BEAR A LESSON IN MANNERS.

IT wanted some hours, when he arrived at the wharf, before the boat's time for departure. He had to lounge about and wait as best he could; therefore at last he went into a coffee-shop near at hand, because he did not know what else to do with himself, drank some coffee and tried to eat, but felt as if every mouthful would

tained that a train left for Cologne early the next morning. He knew his mother had gone to Cologne on her way to Heidelberg, and he thought he would do so too; and he felt so tired with his sleepless night, that though he might have gone on at once, he decided on remaining at Antwerp till the morning. He would dispose of his watch before he started, for he now remembered that it was Sunday afternoon, and thought he might not be able to do so that day.

But as he walked on he saw that some shops, though not all, were open; and then he remembered that Sunday is differently kept on the Continent from what it is in England, for presently he came to what seemed a new world, and made him for a little time forget all the miseries he had brought upon himself, and all the ill-usage he had received—at his own hands. It was a fair, and a fair on such a scale as Lawrence had never dreamed of. He found himself walking through street upon street of booths, with crowds of people going in and out and up and down, laughing, jostling, pushing, chattering, but all in good temper, and, as far as he could see, sober. One must do the Antwerp folk the justice to say that, whatever one may think of their way of spending Sunday.

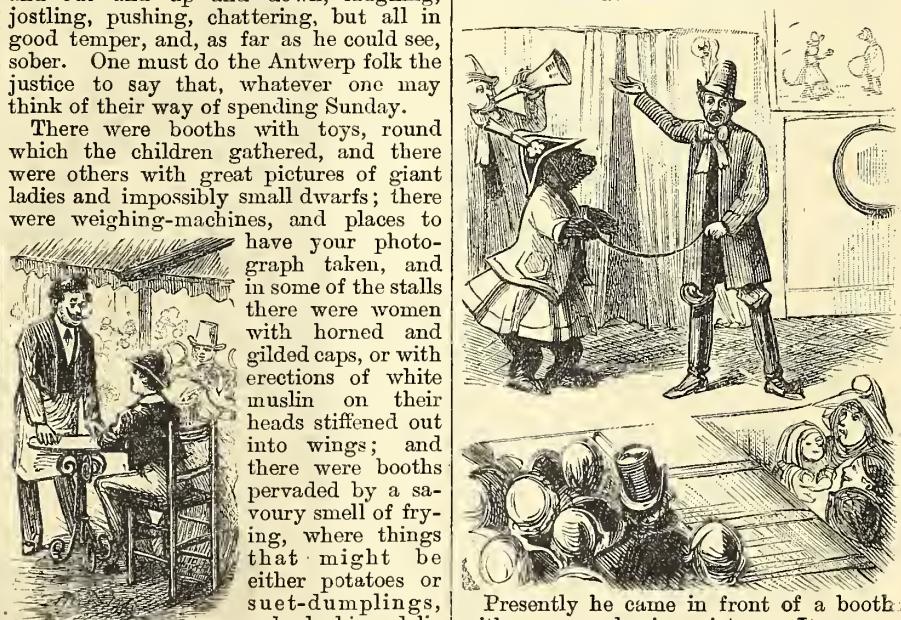
There were booths with toys, round which the children gathered, and there were others with great pictures of giant ladies and impossibly small dwarfs; there were weighing-machines, and places to have your photograph taken, and in some of the stalls there were women with horned and gilded caps, or with erections of white muslin on their heads stiffened out into wings; and there were booths pervaded by a savoury smell of frying, where things that might be either potatoes or suet-dumplings, only looking deliciously brown and nice, were being consumed at a sharp rate by the hungry; and one booth of great pretensions and many small tables called itself a "restaurant," and, as he found that he could get a cutlet and some coffee there, he went in and sat down at one of the little tables.

He was not actually hungry, but faint and exhausted for want of food, and

though he ate mechanically and with little relish, he still felt the better soon for what he had taken. Two days ago he would have been disgusted at the idea of eating at such a place and with such surroundings, but for a time at least his misery had taught him humility. He forgot even to call the people, although they were all apparently of the working or lower middle-class, "cads," although their amusements were quite as unrefined as those of the London East-enders, who had so often come between the wind and his gentility when they went down to Epping Forest for the day.

"It does seem a strange way of spending Sunday," was all he said in their disparagement.

When he had finished his repast, he thought he had better go out and find quiet sleeping-quarters for the night. He would get out of the fair first, and then look about him. He took the broadest avenue between the booths, concluding that if he only went straight on he must leave the fair at last behind him.



Presently he came in front of a booth with a very glowing picture. It represented monkeys more or less dressed, and of various sizes, some as belles and some as beaux—one with a fan and a Spanish mantilla, another in a soldier's uniform. But the centre of the picture was a great bear, in a cocked-hat, a scw^o of tunic, perhaps because it was found impossible to get his legs into trousers, and a very smart frogged and braided coat. A great

many people were admiring this bear, or the portrait of him, and when the original came out on the platform, with the showman in attendance, there was quite a burst of applause.

The bear was not quite so large as he was represented in the picture, but the dress and the cocked-hat were very accurate. He had also to submit to the indig-
nity of a rope round his neck, which, as the artist had given him the title as well



as the uniform of a general in the picture, might perhaps be considered unworthy of him. But, however, the general had to submit to it, as well as to have the public informed that for the small charge of ten centimes they should be admitted to the interior of the booth, where monsieur the general would perform a *minuet du cour* for their gratification, and Mesdames Coralie and Rosalie, and messieurs their friends—with a flourish of the showman's stick towards the gaily-painted monkeys—would dance a cotillon.

"Comme il est grand cet ours! c'est terrible!" said a small shrewish voice below Lawrence's waist, and, looking down, he saw a tiny woman—so tiny that it was a wonder some of the showmen had not persuaded her to be exhibited as a dwarf. She was about forty, neatly dressed, not in the least deformed, and with a pale, plain, but rather sensible face. Seeing Lawrence look at her, she addressed him first in French, which she spoke with an accent very different from that of Paris, and asked him to buy some flowers of her, and then in German. She had a basket on her arm, with small bouquets in it. Lawrence shook his head in reply—he had no use for flowers, he told her in French, speaking almost as politely as Robert himself could have done.

Just then there was a sudden exclamation of horror and fright from the crowd, and the little woman, turning her head, joined in it as shrilly as any one. The bear had broken loose from the showman, sprung to the ground, and was walking along on all fours, with a very evil expression on his face, as if he had been kept too long without his dinner, and was looking about for some one who would make a suitable meal. He had no muzzle on, for the showman had been asking monsieur the general to show his fine teeth and smile on the company. Perhaps the general had resented this, or various other little liberties which had been taken

with him, for when his owner advanced, stick in hand, to induce him to return, monsieur raised himself on his hind legs, gave a terrible growl, and, instead of cowering before the stick, made as if he would hug the person who threatened him in an embrace which would be much more like that of a bear than of a general or a gentleman.

The showman retreated before the formidable outstretched paws and grinning mouth of monsieur. He was new at this trade, and began to think he should not find it to his liking. Of course, when he showed signs of fear the alarm of the crowd was greater than ever. They hustled, and jostled, and trod on one another, and fell down in each other's way, and behaved as crowds generally do in a panic. The little woman with her flowers was as defenceless as a child, with all these full-grown people pressing on her. Down she fell, and the contents of her basket were scattered on the ground. The bear came nearer, still walking on all fours, and seemed as if he was disposed to pick her up, an attention which the poor little creature, on her part, did not seem disposed to appreciate, for she screamed as loudly as the tallest woman there could have done, and called for help in French and German.

The bear came on, still in his upright attitude, evidently feeling that it gave

him more importance, and quite convinced that he was master of the situation. The crowd had retreated before him, the showman almost as much scared as any one amongst them, and the bear now stood confronting Lawrence, who, if he had felt disposed to run away, could not have done so, the little woman clung so desperately to his legs, and appealed to him to save her.

But whatever Lawrence's faults might be, cowardice was not one of them, and, just for that moment, he forgot even the misery that had been so weighing him down, and only remembered—perhaps rather loftily—that he was an English boy, with the honour of his country in his hands, and all these poor frightened Belgians to see him sustain it. He doubled his fist—he had a nice little notion of boxing—and down came that fist on monsieur's head, while with the other hand he seized the rope round the neck, and before the general could carry out his intention of returning Lawrence's salute by an embrace (bear fashion), he found the salute repeated, while his assailant was behind him, pulling the rope in such a fashion that monsieur the general found himself in danger of being throttled, and followed his captor with a docility that showed he had not altogether forgotten the early lessons of his youth.

(To be continued.)

THE CRYPTOGRAM.

CHAPTER XX.—(Continued.)



Joam Dacosta was received with frenzied cheers.

THE arrival of the jangada had been signalled for some days. The whole town knew the story of Joam Dacosta. They came forth to welcome him, and to him

and his people accorded a most sympathetic reception.

Hundreds of craft of all sorts conveyed them to the fazender, and soon the jangada was invaded by all those who wished to welcome the return of their compatriot after his long exile. Thousands of sight-seers—or more correctly speaking, thousands of friends—crowded on to the floating village as soon as it came to its moorings, and it was vast and solid enough to support the entire population. Amongst those who hurried on board one of the first pirogues had brought Madame Valdez. Manoel's mother was at last able to clasp to her arms the daughter whom her son had chosen. If the good lady had not been able to come to Iquitos, was it not as though a portion of the fazenda, with her new family, had come down the Amazon to her?

Before evening the pilot Araujo had securely moored the raft at the entrance of a creek behind the arsenal. That was to be its last mooring-place, its last halt, after its voyage of eight hundred leagues on the great Brazilian artery. There the huts of the Indians, the cottages of the negroes, the storerooms which held the valuable cargo, would be gradually demolished; there the principal dwelling, nestled beneath its verdant tapestry of flowers and foliage, would in its turn disappear, and lastly the little chapel whose humble bell was then replying to the sounding clangour from the steeples of Belem.

But, ere this was done, a ceremony had to take place on the jangada—the marriage of Manoel and Minha, the marriage of Lina and Fragoso. To Father Passanha fell the duty of celebrating the double union which promised so happily. In that little chapel the two couples were to receive the nuptial benediction from his hands.

If it happened to be so small as to be only capable of holding the members of Dacosta's family, was not the giant raft large enough to receive all those who wished to assist at the ceremony? and if not, and the crowd became so great, did not the banks of the river afford sufficient room for as many others of the sympathising crowd who were desirous of welcoming him whom so signal a reparation had made the hero of the day?

It was on the morrow, the 16th of October, that the marriages were celebrated with great pomp.

It was a magnificent day, and from about ten o'clock in the morning the raft began to receive its crowd of guests. On the bank could be seen almost the entire population of Belem in holiday costume. On the river vessels of all sorts crammed with visitors gathered round the enormous mass of timber, and the waters of the Amazon literally disappeared up to the left bank of the river beneath the vast flotilla.

When the chapel bell rang out its opening note it seemed like a signal of joy for ear and eye. In an instant the churches of Belem replied to the bell of the jangada. The vessels in the port were decked with flags up to their mastheads, and the Brazilian colours were saluted by the many other national flags. Discharges of musketry reverberated on all sides, and it was only with difficulty that their joyous detonations could cope with the loud hurrahs from the assembled thousands which rent the air.

The Dacosta family came forth from their house and moved through the crowd towards the little chapel. Joam was received with absolutely frantic applause.

He gave his arm to Madame Valdez; Yaquita was escorted by the Governor of Belem, who, accompanied by the friends of the young army surgeon, had expressed a wish to honour the ceremony with his presence. Manoel walked by the side of Minha, who looked most fascinating in her bride's costume, and then came Fragoso, holding the hand of Lina, who seemed quite radiant with joy. Then followed Benito, then old Cybele and the servants of the worthy family, between the double ranks of the crew of the jangada.

Padre Passanha awaited the two couples at the entrance of the chapel. The ceremony was very simple, and the same hands which had formerly blessed Joam and Yaquita were again stretched forth to give the nuptial benediction to their child.

So much happiness was not likely to be interrupted by the sorrow of long separation. In fact, Manoel Valdez almost immediately sent in his resignation, so as to join the family at Iquitos, where he is still following his profession as a country doctor.

Naturally the Fragosos did not hesitate to go back with those who were to them friends rather than masters.

Madame Valdez had no desire to separate so happy a group, but she insisted on one thing, and that was that they should often come and see her at Belem. Nothing

could be easier. Was not the mighty river a bond of communication between Belem and Iquitos? In a few days the first mail steamer was to begin a regular and rapid service, and it would then only take a week to ascend the Amazon, on which it had taken the giant raft so many months to drift. The important commercial transactions, ably managed by Benito, were carried through under the best of conditions, and soon of what had formed this jangada—that is to say, the huge raft of timber constructed from an entire forest at Iquitos—there remained not a trace.

A month afterwards the fazender, his wife, his son, Manoel and Minha Valdez, Lina and Fragoso, departed by one of the Amazon steamers for the immense establishment at Iquitos of which Benito was to take the management.

Joam Dacosta re-entered his home with his head erect, and it was indeed a family of happy hearts which he brought back with him from beyond the Brazilian frontier. As for Fragoso, twenty times a day at least was he heard to repeat, "What without the liana?" and he wound up by bestowing the name on the young mulatto who, by her affection for the gallant fellow fully justified its appropriateness. "If it were not for the one letter," he said, "would not Lina and Liana be the same?"



THE END.

NAUTICUS IN SCOTLAND:

A TRICYCLE TOUR OF 2,446 MILES IN SIXTY-EIGHT DAYS.

BY THE AUTHOR OF "NAUTICUS ON HIS HOBBY-HORSE."

(Continued from page 359.)

Kyle Rhea to Broadford.

From the top of Bein na-Caillach* I had a commanding view of Sleat Sound, the deep blue water being flecked with the white sails of the coasters.

Having mounted, I was just commencing to move, when a sudden squall burst upon me, and in a second I was being whirled along by a furious gust of wind. To my horror, I discovered that I was being carried at railway speed down a steep pitch, with only a low wall between me and a frightful precipice. Moreover the road twisted in and out in a succession of sharp corners. It was an anxious moment! Had I lost my head for a second nothing could have saved me.

I dared not put too much pressure on the brake, for fear my invalid tyre should pucker up, and cause us to take a double summersault into the yawning abyss.

However, I managed to gimlet the machine round the angles, and gradually to bring it under control, when I sprang off, and did not attempt to ride again until the squall was over.

The inland view of Skye was dreary in the extreme—bare high land and bog, without a tree to relieve the monotony.

I rode down three miles to the main road, but had to be careful even here, there being a deep cleft one side most of the way.

Turning to the left, I had three more miles and a strong head wind, with heavy rain, to encounter before arriving at Broadford Inn.

It was not pleasant after all my toils to be told that I could not be lodged at the hotel, but should have to walk half a mile to and fro through the rain between that and a cottage where I was to sleep.

Nine o'clock had struck before I sat down to tea. While toasting myself over the fire afterwards I read a letter from home, saying that the heat in England was almost insufferable!

Tomdoun to Cluny = 10½ miles.

Cluny to Shiel Inn = 12 ,,

Shiel Inn to Kyle Rhea = 11½ ,,

Kyle Rhea to Broadford = 12 ,,

Total run = 46

31st Day.

Broadford. Sligachan. Portree.

My room in the cottage was very clean and comfortable, and I managed to dodge the rain when going to and fro.

During breakfast I asked my neighbour to tell me what places in Skye would best repay a visit. His reply was, "I have seen nothing. Continuous rain has kept me indoors for the whole fortnight I have been here, and now my holiday is up."

11 a.m. Taking advantage of a lull, I started for Sligachan, and although the rain soon came on again, the surface being good, I managed to get along very well. The road rose a little at first, then declined to the Sound of Scalpa, from thence it went over a hill and down to the head of Loch Ainort.

Here a perfect hurricane of wind and rain drove me into a cottage, or rather a bothie. A fine young fellow was sitting by a low peat fire, some of the smoke from which curled up through a rough wooden chimney, the rest found its way into the room. The windows were small, and the walls very thick. A dog crouched as close to the embers as he could without singeing his tail, and presently some fowls walked in and made themselves quite at home.

My host's story was a melancholy one. The bad weather had driven all the fish out of the bay. He had toiled through the last two nights and had caught nothing.

On my remarking that his house seemed to be

in a wild spot, he said that it was the stormiest place in Skye. The gusts on some occasions were terrific, making it unsafe for the mail-cart to travel, and he had known it to have been actually blown over.

After we had been chatting about a quarter of an hour, in came a bonnie lassie. I rose to shake hands with her, and she seated herself with all the ease and grace of a lady. "Your wife, I suppose?" said I to the man. "My

in the face, and not only stopped my progress, but was positively sending me backwards, when I hopped off my machine in a quarter less than no time. Well it was that I did so, for a moment later another came sideways, and had I been mounted it might have blown me into the gully below, a matter of about a hundred feet.

The road round Loch Sligachan was level and in capital order, but I could hardly make any way against the wind and rain.

The lonely inn stands on a bleak plain at the head of the loch, and while approaching I thought it to be the most uninviting-looking place I had ever set eyes upon.

A change of clothing and a hot meal served by an attentive waiter soon caused me to take a more cheerful view of things in general. In the smoking-room afterwards, an Oxonian, travelling with his tutor, related their misfortunes.

Three times had they started for Loch Coruisk, and on each occasion were driven back by the weather, and the Cuchullins, which they had specially wished to see, had not once been clear during their stay in Skye.

To hear all this was very discouraging to a poor cyclist, but, wet or fine, I determined to go through with my programme.

Presently, on looking out of the window, I saw a wee bit of blue sky, and gleefully declared to my friends that it was going to be fine. "Too good to be true," was their reply; but before long the sun burst forth and all was gladness.

Not a moment was to be lost. I slipped into my half-dried clothes and trotted out my rusty and travel-stained vehicle. My friends wished to go to the top of the hill with me, and I was only too glad to have their company, so we all walked together for about two miles.

We frequently stopped and looked back to admire the most magnificent mass of mountains in Scotland.

Wave after wave of the vapour curtain rolled away before the breeze, until the jagged outlies stood out clearly against the sky, their sides being beautifully tinted by the evening sun.

The student acted the part of an instructor to me, and said, "That singular peak on the right is the king of the group—Seour na Gillean, or Gillies Hill, so named from two lads who were killed while attempting its ascent. The black wall in the centre, with remarkably serrated outline, is Blaven; the red one next to it on the left, with the beetling brow, is Marscow; the sugarloaf one you know to be Glamaig." His enthusiasm was refreshing, and he declared that he had not on the Continent seen anything to excel this view in grandeur.

Parting from these gentlemen at the top of the hill, I ran on a level for a mile or so, then down by some patches of cultivation to Portree Bay, and round by its shores to the town.

The detached pinnacle commonly called the Old Man of Storr was very conspicuous in the distance, and looked like a sentinel on his post.

As I came nearer, the appearance of Portree, with the yachts lying in the harbour, had a very pleasing effect.

My advent into the town was of a very lively description. The working population were basking in the sun after the toils of the day. On sighting me a shout arose, and a simultaneous rush was made from all quarters in my direction, and an excited crowd escorted me to the door of the Royal Hotel.

When walking to the post-office afterwards I heard several people discussing the latest arrival, and disputing as to the number of wheels, etc.

I had tea with the brothers F. (Cambridge men), and ascertained that they, like myself, were bound for the Quirang. Being obliged to catch the afternoon steamer they intended making an early start in a dog-cart. In reply to an invitation to accompany them, I said I should be unable to keep pace, but we agreed to breakfast together.

Broadford to Sligachan = 15 miles.
Sligachan to Portree = 9½ ,,

Total 24½ ,,

(To be continued.)

* The height of this pass is calculated to be two thousand feet.



sister," replied he. On my making some commonplace remark with the idea of drawing her out, she merely bowed and smiled, and her brother observed, "She has no English!" so I had to content myself with the language of the eye.

By-and-by, there being a slight pause in the war of the elements, I set forth again. My way was barred by a wall of mountains which rose just in front of me, the black storm-clouds which swirled about their sides making them look inexpressibly grand, I might almost say terrible.

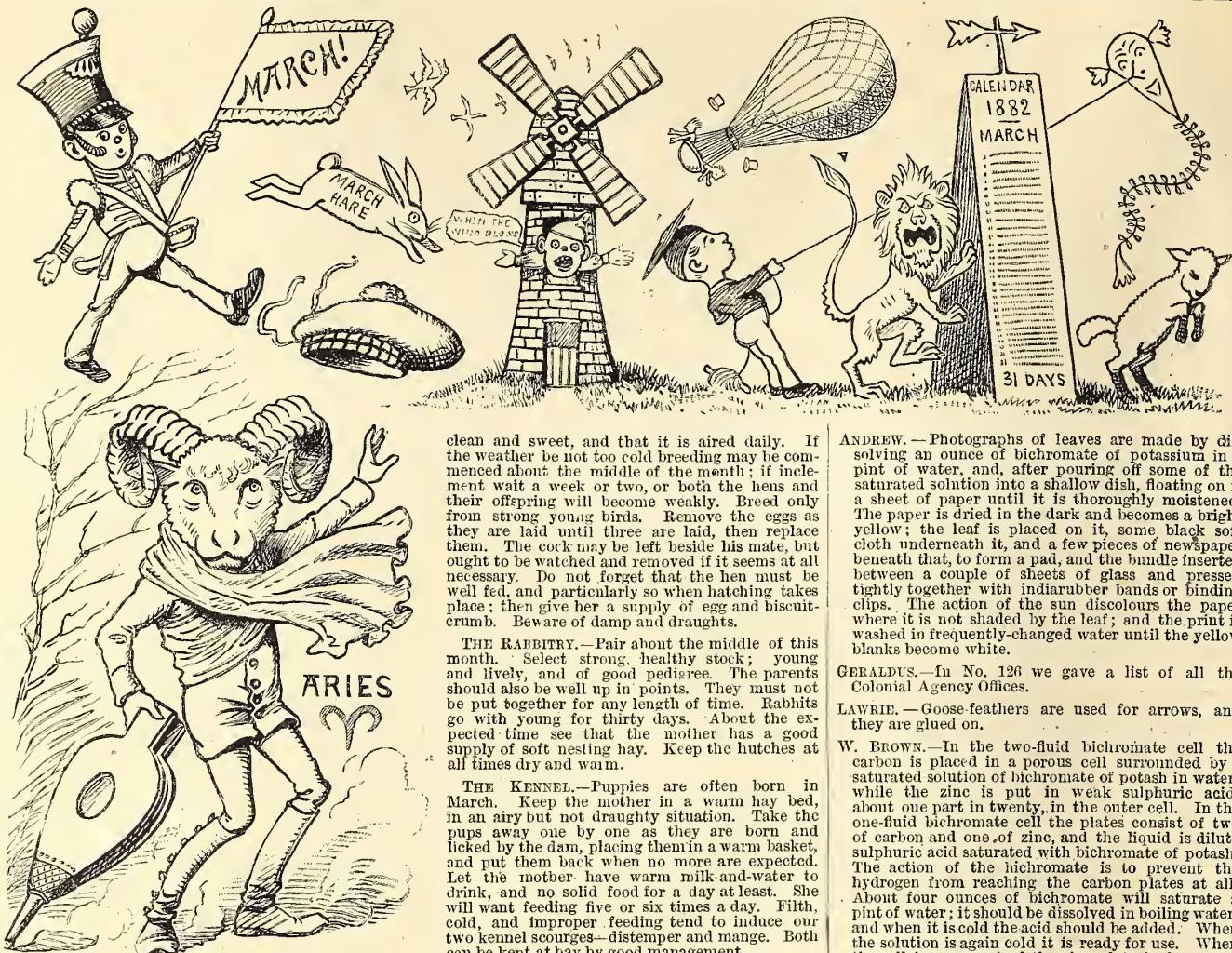
I had a tough job to get my tricycle on to the shoulder of Glamaig, the gradient being very severe, and the surface loose sand. From thence a gentle descent round the base led to Loch Sligachan.

I had believed the fisherman's mail-cart story from having yesterday experienced something of the kind myself. I now had another practical illustration of the force of the wind in these passes.

I was running quietly down at about six



miles an hour, when a sudden blast met me full



DOINGS FOR THE MONTH.

THE POULTRY RUN.—The setting season has now fairly commenced. Choose good eggs, with perfect shells, from strong, healthy fowls; and, if any particular strain is desired from your own run, do not neglect to mark them and place them carefully away until wanted. Extremes of either heat or cold will injure the eggs, and they ought to be set if possible within a week of the time of being laid. If kept over a fortnight there is less chance of satisfactory results. Make the nests on the ground, in a place where there is no chance of the sitters being annoyed by other fowls. The nests must still be warm, and the eggs not too numerous. Moistening the eggs with a sprinkling of warm water does good in dry weather, but many people prefer dipping them for just a moment or two at night, when the hen sits close. Feed your sitting fowls well in the forenoon when they come off the nests. Let the food be hard, such as Indian corn or barley, and do not forget that they need plenty of water, and green food as well. Do not encourage them to remain off too long. A fowl sits for twenty-one days, but sometimes the eggs are hatched a day before. When they are hatched, remove the hen to a clean nest, and get rid of the old one. Keep the run very clean, devoting a certain portion of time twice a day to keeping the place in apple-pie order. Neither gravel, food, water, greenmeat, nor the dust-bath must be forgotten, and in cold weather a stimulating meal of oatmeal and kitchen scraps should be given.

THE PIGEON LOFT.—Towards the end of this month you may begin mating your birds. It is better, however, not to be in too great a hurry, especially if the weather be inclement. Make as good a selection of the parent stock as you can, not forgetting that "like begets like," and that stock of all kinds has a tendency to throw back to pedigree. Mate no two birds that have faults of the same kind in their properties. The best plan to pair pigeons is to place those you have chosen to be mates in adjoining pens where they can see each other, but not their former companions. In two or three days they may be matched. When the first egg is laid it should be taken away until the other arrives, then replaced. In eighteen days, if the eggs are fertile, incubation will have taken place. If you have not completed your spring cleaning, go in for it in the early part of the present month. Beware of overcrowding your pigeon-loft.

THE AVIARY.—Finish preparations for the breeding season. If you have a bird-room see that it is kept

clean and sweet, and that it is aired daily. If the weather be not too cold breeding may be commenced about the middle of the month; if inclement wait a week or two, or both the hens and their offspring will become weakly. Breed only from strong young birds. Remove the eggs as they are laid until three are laid, then replace them. The cock may be left beside his mate, but ought to be watched and removed if it seems at all necessary. Do not forget that the hen must be well fed, and particularly so when hatching takes place; then give her a supply of egg and biscuit-crumbs. Beware of damp and draughts.

THE RABBITRY.—Pair about the middle of this month. Select strong, healthy stock; young and lively, and of good pedigree. The parents should also be well up in pots. They must not be put together for any length of time. Rabbits go with young for thirty days. About the expected time see that the mother has a good supply of soft nesting hay. Keep the hutches at all times dry and warm.

THE KENNEL.—Puppies are often born in March. Keep the mother in a warm hay bed, in an airy but not draughty situation. Take the pups away one by one as they are born and licked by the dam, placing them in a warm basket, and put them back when no more are expected. Let the mother have warm milk and water to drink, and no solid food for a day at least. She will want feeding five or six times a day. Filth, cold, and improper feeding tend to induce our two kennel scourges—distemper and mange. Both can be kept at bay by good management.

Correspondence.

RALPH.—1. Instructions have already been given—a "multiscript" is only another "graph." 2. Buy them. You cannot make aniline inks in a small way. 3. It depends on what game you intend playing. The Rugby game has an egg-shaped ball (from the old bladder which used to be the ball); the Association game has a round ball. See our articles. 4. In Vol. I, we gave full directions for making coloured fires. Try our first number.

ARGENTIEXT, ETC.—1. Cannot say. 2. Under any circumstances we would hardly presume to sit in judgment on Mr. Ruskin; but in discussing the value of your favourite writers, you should remember the "de mortuis nil nisi bonum" which so often leads writers into extravagant praise. One may be great admirers of George Eliot's works, and rate them very highly indeed, yet still not consider her far and away the greatest novelist that ever lived—nor will any one else in a year or two.

GREENHORN.—See our "Boy's Own Museum" articles in last volume.

A BOOKSELLER.—Boys are admitted to the Bluecoat School between the ages of eight and ten. You must get a presentation from one of the governors, a list of which you can get at the Hospital for half-a-crown. A list is also published there, at a shilling, of the order in which they stand for bestowing presentations. The lad's birth certificate, and the parents' marriage certificate, must be produced.

MOT.—1. In the time of Nelson the British sailor did up his hair in a kind of club or pigtail, and this you can see in any picture or illustration of the period. 2. Neptune was introduced to the Sailor Princes when they crossed the Line.

SUSIE, AN OLD BOY, AND OTHERS.—We can help you in your inquiries as to date, publishers, etc., of books only when you give us the author's name and initials. Smith's "History of England" is as good as anonymous. Which Smith? Do you mean Sniff's?

FAT.—The crest of the Allfrey family is an ostrich's head between two ostrich feathers argent, gorged with a ducal coronet or. The motto varies.

ANDREW.—Photographs of leaves are made by dissolving an ounce of bichromate of potassium in a pint of water, and, after pouring off some of the saturated solution into a shallow dish, floating on it a sheet of paper until it is thoroughly moistened. The paper is dried in the dark and becomes a bright yellow; the leaf is placed on it, some black soft cloth underneath it, and a few pieces of newspaper beneath that, to form a pad, and the bundle inserted between a couple of sheets of glass and pressed tightly together with indiarubber bands or binding clips. The action of the sun discolours the paper where it is not shaded by the leaf; and the print is washed in frequently-changed water until the yellow blanks become white.

GERALDUS.—In No. 126 we gave a list of all the Colonial Agency Offices.

LAWRIE.—Goose-feathers are used for arrows, and they are glued on.

W. BROWN.—In the two-fluid bichromate cell the carbon is placed in a porous cell surrounded by a saturated solution of bichromate of potash in water, while the zinc is put in weak sulphuric acid, about one part in twenty, in the outer cell. In the one-fluid bichromate cell the plates consist of two of carbon and one of zinc, and the liquid is dilute sulphuric acid saturated with bichromate of potash. The action of the bichromate is to prevent the hydrogen from reaching the carbon plates at all. About four ounces of bichromate will saturate a pint of water; it should be dissolved in boiling water, and when it is cold the acid should be added. When the solution is again cold it is ready for use. When the cell is not required the zinc plate is drawn up out of the liquid, and no action takes place.

DICKY BOY.—The address of Messrs. W. and E. Chambers is Paternoster Row, though "Publishers, London," would find them.

W. S. THOMSON.—1. Jules Verne is still alive and writing. The "Giant Raft" and "Cryptogram" appeared in our columns contemporaneously with their first appearance in French, and it was only after their appearance in the Boy's OWN PAPER that they were issued in serial form in America and Australia, and in book form in England. 2. With large compasses. 3. Varnish first, and dust on the gold powder. 4. Too political. 5. "Phiz" is the pseudonym of Hablot K. Browne.

ECOLIER.—See the treatises on the Cotton Famine by Dr. Watts, of Manchester, or Mr. Bainbridge. The famine occurred during the American Civil War commencing in 1861. In 1860 the imports of cotton were 1,391,000,000 pounds; in 1861, 1,257,000,000; in 1862, 524,000,000; in 1863, 669,000,000; in 1864, 933,000,000; in 1865, 978,000,000. In 1863, 189,000 operatives are said to have been out of work.

A. B. COULSON.—The Severn rises at Blaen Hafren, where the infant river rolls over a lofty ledge of slate.

D. R.—You can get a luminous fishing-float for eighteenpence at any London or country tackle-maker's.

H. HOWARD.—See our articles in last volume, entitled "The Boy's Own Museum."

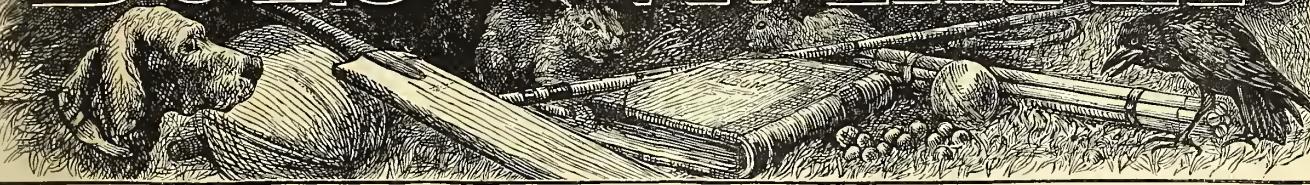
STELLA.—The "Catalogue of Stars," published by the British Association in 1845, contains the mean right ascensions and North Polar distances of 3,377 fixed stars, reduced to Jan. 1, 1850, together with their annual precessions, secular variation, etc. In its compilation no less than thirty-two preceding catalogues were consulted.

E. B. MASON.—For all works connected with the trades or mechanical arts, apply to Messrs. Lockwood and Co., or Messrs. Spon.

E. L.—1. Wrangler is a term come down to us from the Middle Ages, when college exercises were "disputations," and the students who took part in them were "disputants." The disputations of most of the schoolmen were mere word-battles or wrangles, and hence the name. 2. You can clean old nibs by sticking them into a raw potato.

J. R. THORNLEY.—1. There were very few coined in that year. 2. We have not the slightest intention of increasing our price. The BOY'S OWN PAPER was started at a penny, and will remain at a penny.

THE BOY'S OWN PAPER



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WILD ADVENTURES ROUND THE POLE;

OR, THE CRUISE OF THE ARRANDOON.

(A SEQUEL TO "THE CRUISE OF THE SNOWBIRD.")

BY GORDON STABLES, M.D., R.N.

CHAPTER XXV.—BREAKING-UP OF THE GREAT ICE PACK
—IN THE NIPS—THE CANNY SCOTIA ON HER BEAM-ENDS
STAVING OF THE ARRANDOON.

IN the very midst of joy and pleasure in this so-called weary world, we are oftentimes very nigh to grief and pain.

See yonder Swiss village by the foot of the mountain, how peacefully it is sleeping in the moonlight; not a sound is to be heard save the occasional crowing of a wakeful cock, or the voice of watch-dog baying the moon. The inhabitants have gone to bed hours and hours ago, and their dreams, if they dream at all, are assuredly not dreams of danger. But hark to that

"There will be a severe nip to-night."

terrible noise far overhead. Is it thunder? Yes, the thunder of a mighty avalanche. Nearer and nearer it rolls; till it reaches the devoted village, then all is desolation and woe.

See yet another village, far away in sunny Africa; its little huts nestle around the banyan-tree, the tall eocoa-palm, and the wide-spreading mango. They are a quiet, inoffensive race who inhabit that village. They live south of the line, far away from treacherous Somali Indians or wild Magulla men; they never even dreamt of war or bloodshed. They certainly do not dream of it now.

"The babe lies in its mother's arms,
The wife's head pillow'd on the husband's
breast."

Suddenly there is a shout, and when they awake—oh! horror! their huts are all in flames, the Arab slavers are on them, and—I would not harrow your young feelings by describing the scenes that follow.

But a ship—and this is coming nearer home—may be sailing over a rippling sea, with the most pleasant of breezes filling her sails, no land in sight, and every one, fore and aft, as happy as the birds on an early morning in summer, when all at once she rasps, and strikes—strikes on a rock, the very existence of which was never even suspected before. In half an hour perhaps that vessel has gone down, and those that are saved are afloat in open boats, the breeze freshening every moment, the wave-tops breaking into cold spray, night coming on, and dark threatening clouds banking up on the windward horizon.

When the first wail arose from the pack that announced the breaking-up of the sea of ice, a silence of nearly a minute fell on the sailors assembled at the entertainment. Music stopped, dancing ceased, and every one listened. The sound was repeated, and multiplied, and the ship quivered and half reeled.

McBain knew the advantage of remaining calm and retaining his presence of mind in danger. Because he was a true sailor. He was not like the sailor captains you read of in penny dreadfuls—half coal-heaver, half Herzegovinian bandit.

"Odd, isn't it?" he muttered, as he stroked his beard and smiled; then in a louder voice he gave his orders.

"Men," he said, "we'll have some work to do before morning—get ready. The ice is breaking up. Pipe down, bo'swain. Mr. Stevenson, see to the clearing away of all this hamper."

Then, followed by Rory and the doctor, he got away out into the daylight.

The ships were all safe enough as yet, and there was only perceptible the gentlest heaving motion in the pack. Sufficient was it, however, to break up the bay ice between the bergs, and this with a series of loud reports, which could be heard in every direction. McBain looked overboard somewhat anxiously; the broken pieces of bay ice were getting ploughed up against the ship's side with a noise that is indescribable, not so much from its extreme loudness as from its peculiarity; it was a strange mixture of a hundred different noises, a wailing, complaining, shrieking, grinding noise, mingled with a series of sharp irregular reports.

"It is like nothing earthly," said Rory, "that ever I heard before; and when I close my eyes for a brace of seconds, I could imagine that down on the pack there two hundred tom-cats had lain down

to die, that twenty Highland bagpipers—twenty Peters—were playing pibrochs of lament, and that just foreenest them a squad of militia-men was firing a *feu-de-joue*, and that neither the militia-men nor the pipers either, were as self-contained as they should be on so solemn an occasion."

The doctor was musing; he was thinking how happy he had been half an hour ago, and now—heigho; it was just possible he would never get back to Iceland again, never see his blue-eyed Danish maiden more.

"Pleasures," he cried, "pleasures, Captain McBain—"

"Yes," said McBain, "pleasures."

"Pleasures," continued the doctor,

"are like poppies shed,
You seize the flower, the bloom is fled."

I'll gang doon below. Bed is the best place."

"Perhaps," said McBain, smiling, "but not the safest. Mind, the ship is in the nips, and a berg might go through her at any moment. There is the merest possibility of your being killed in your bed. That's all; but that won't keep you on deck."

Mischiefous Rory was doing ridiculous attitudes close behind the worthy surgeon.

"What!" cried Sandy, in his broadest accent. "That not keep me on deck! Man, the merest possibility of such a cawtawstrophy would keep me on deck for a month."

"A vera judeecious arrangement," hissed Rory in his ear, for which he was chased round the deck, and had his own ears well pulled next minute. The doctor had him by the ear when Allan and Ralph appeared on the scene.

"Hullo!" they laughed, "Rory got in for it again."

"Whustle," cried Sandy.

"I only said 'a vera—'" began Rory.

"Whustle, will ye?" cried the doctoer.

"I can't 'whustle,'" laughed Rory.

But he had to "whustle," and then he was free.

"It's going to be a tough squeeze," said Silas to McBain.

"Yes; and, worse luck, the swell has set in from the east," answered the captain.

"I'm off to the Canny Scotia; good morning."

"One minute, Captain Grig; we promised to hoist up Cobb's cockle-shell. Lend us a hand with your fellows, will you?"

"Ay, wi' right good will," said Silas.

There were plenty of spars on board the Arrandoon big enough to rig shears, and these were sent overboard without delay, with ropes and everything else required.

The men of the Arrandoon, assisted by those of the Canny Scotia, worked with a readiness and will worthy even of our gallant Royal Engineers. A shears was soon rigged, and a winch got up. On a spar fastened along the cockle-shell's deck the purchase was made, and under the superintendence of brave little Ap the work began.

For a long time the "shell" refused to budge, so heavily did the ice press around her; the spar on her deck started, though, several times. "Worse luck," thought little Ap. He had the spar refastened. Tried again. The same result followed. Then little Ap considered, taking "mighty" big pinches of snuff the while.

"We won't do like that," he said to himself, "because, look you see, the pur-

chase is too much on the perpendicular. Yes, yes."

Then he had the spar elevated a couple of yards, and fastened between the masts, which he had strengthened by lashing extra spars to them. The result of this was soon apparent. The hawsers tightened, the little yacht moved, even the pressure of the ice under her helped to lift her as soon as she began to heel over, and in half an hour afterwards the cockle-shell lay in a very ignominious position indeed—beam-ends on the ice.

"Bravo!" cried Silas, when the men had finished their cheering. "Bravo! what would long Cobb say now? what would he say? Ha! ha! ha!"

Silas Grig laughed and chuckled till his face grew redder than ever, but he would not have been quite so gay, I think, had he known what was so soon to happen to his own ship.

Stevenson touched McBain on the shoulder.

"The ice presses heavy on the rudder, sir."

"Then unship it," said McBain.

"And I'll unship mine," said Silas.

Unshipping rudders is a kind of drill that few save Greenland sailors ever learn, but it is very useful at times, nevertheless.

In another hour the rudders of the two ships were hoisted and laid on the bergs. So that was one danger past.

But others were soon to follow, for the swell under the ice increased, the bergs all around them rolled higher and higher. The noise from the pack was terrific, as the pieces met and clashed and ground their slippery sides together. In an hour or two the bay ice had been either ground to slush, or piled in packs on top of the bergs, so that the bergs had freedom to fight, as it were. Alas! for the two ships that happened to be between the combatants. Their position was, indeed, far from an enviable one. Hardly had an hour elapsed ere the ice-harbours McBain and Silas had prided themselves in, were wrecked and disintegrated. They were then, in some measure, at the mercy of the enemy, that pressed them closely on every quarter. The Canny Scotia was the worst off—she lay between two of the biggest bergs in the pack. McBain came to his assistance with torpedoes. He might as well have tried to blow them to pieces with a child's pop-gun. Better, in fact, for he would have had the same sport with less trouble and expense, and the result would have been equally gratifying.

For once poor Silas lost his equanimity. He actually wrung his hands in grief when he saw the terrible position of his vessel.

"My poor shippie," he said. "God help us! I was building castles in the air. But she is doomed! My bonnie ship is doomed."

At the same time he wisely determined not to be idle, so provisions and valuables were got on shore, and all the men's clothes and belongings.

As nothing more could be done, Silas grew more contented. It was just his luck, he said, "just his luck."

Long hours of anxiety to every one went slowly past, and still the swell kept up, and the bergs lifted and fell and swung on the unseen billows, and ground viciously against the great sides of the Arrandoon. Now the Canny Scotia was somewhat Dutchified in her build—not as to bows but as to bottom. She was not a clipper by any manner of means, and her build saved her. The ice actually ground her up

out of the water till she lay with her beam ends on the ice, and her keel completely exposed.*

But the Arrandoon had no such build. The ice caught under her forefoot, and she was lifted twelve feet out of the water. No wonder McBain and our heroes were anxious. The former never went below during all the ten hours or more that the squeeze lasted. But the swell gradually lessened, and finally ceased. The Arrandoon regained her position and lost her list, but there lay the Canny Scotia, a pitiable sight to see, like some giant overthrown, silent yet suffering.

When the pumps of the Arrandoon had been tried, and it was found that there was no extra water in her, McBain felt glad indeed, and thanked God from his inmost heart for their safe deliverance from this great peril. He could now turn his attention to consoling his friend Silas. After dinner that day, said McBain,

"Your cabin is all ready, Captain Grig, for of course you will sleep with us now."

But Silas arose silently and calmly.

"I needn't say," he replied, "how much I feel your manifold acts of kindness, but Silas Grig won't desert his ship. His bed is on the Canny Scotia."

"But, my dear fellow," insisted McBain, "the ice may open in an hour, and your good ship go down."

"Then," said Silas, "I go with her, and it will be for you to tell my owners and my little wife—heaven keep her!—that Skipper Grig stuck to his ship to the last."

* As did the P—e, of Peterhead, once for weeks. The men lived on the ice alongside, expecting the vessel to sink as soon as the ice opened. The captain, however, would not desert his ship, but slept on board, his mattress lying on the ship's side. The author's ship was beset some miles off at the same time.

What could McBain say, what argument adduce, to prevent this rough old tar from risking his life in what he considered a matter of duty? Nothing! and so he was dumb.

Then away went Silas home, as he called it, to his ship. He lowered himself down by a rope, clambered over the doorway of the cabin, took one glance at the chaos around, then walked tenderly over the bulkhead, and so literally down to his bed. He found the mattress and bedclothes had fallen against the side, and so there this good man, this true sailor, laid him down and slept the sleep of the just.

But the Scotia did not go to the bottom; she lay there for a whole week, defying all attempts to move her, Silas sleeping on board every night, the only soul in her, and his crew remaining on the Arrandoon. At the end of that time the ice opened more; then the prostrate giant seemed to begin to show signs of returning life. She swayed slightly, and looked as if she longed once more to feel the embrace of her native element; seeing which, scientific assistance was given her. Suddenly she sprang up as does a fallen horse, and hardly had the men time to seek safety on the neighbouring bergs, when she took the water—re-launched herself—with a violence that sent the water flying in every direction with the force of a cataract. It would have been well had the wetting the crew received been the only harm done. It was not, for the bergs moved asunder with tremendous force. One struck the Arrandoon in her weakest part—amidships, under the water-line. She was stove, the timbers bent inwards and cracked, and the bunks alongside the seat of accident were dashed into matchwood. Poor old Duncan Gibb, who was lying in one of these bunks

with an almost united fracture of one of his limbs, had the leg broken over again.

"Never mind, Duncan," said the surgeon, consolingly, "I didn't make a very pretty job of it last time. I'll make it as straight as a dart this turn!"

"Vera weel, sir; and so be it," was poor contented Duncan's reply, as he smiled in his agony.

"Dear me, now!" said Silas, some time afterwards; "I could simply cry—make a big baby of myself and cry. It would be crying for joy and grief, you know—joy that my old shippie should show so much pluck as to right herself like a racehorse, and grief to think she should go and stave the Arrandoon. The ungrateful old jade!"

"Never mind," said McBain, cheerfully, "Ap and the carpenters will soon put the Arrandoon all right. We will shift the ballast, throw her over to starboard, and repair her, and the place will be, like Duncan's leg, stronger than ever."

It did not take very long to right Captain Cobb's cockle-shell, and all the vessels being now in position again, and the ice opening, it might have been as well to have got steam up at once, and felt the way to the open water. McBain decided to make good repairs first; it was just as easy to list the ship among the ice as out of it, and probably less dangerous. Besides, the water kept pouring in, and the beautiful arrangement of blankets and hammock-cloths which Ap had devised, hardly sufficed to keep it out.

This decision of the captain nearly cost the life of two of our best-loved heroes, and poor old Seth as well. But their adventure demands a chapter, or part of one, at least, to itself.

(To be continued.)

THE TWO CABIN-BOYS:

A STORY OF ADVENTURE BY LAND AND SEA.

BY LOUIS ROUSSELET.

CHAPTER XXII.—THE GOLD MINE.

IMMEDIATELY after the conference held in the private parlour of the Gay Companion, Dominique set to work with his preparations for the expedition in which he was to accompany the two cabin-boys. He soon got together the tools required for working the mine, as well as a small tent to serve for their lodging in the desert, and supplies of flour and preserved meats sufficient for several months. To these purchases he added an old second-hand musket and a pair of revolvers, firearms being indispensable in a country where there were as many robbers as gold-diggers. Lastly he obtained on credit through the Colonisation Office two mules to carry the tools and provisions. Dominique's purse was completely emptied by these numerous purchases, and so, as soon as everything was ready, the little troop one fine morning quitted Melbourne and started for the north.

At the consulate Daniel and Penguin had obtained the necessary information as to the route they had to follow to reach the confluence of the Murray and the Murrumbidgee. The French consul had given them a map of Victoria, on which he had obligingly marked the itinerary they had to follow. The lads had managed the business with great prudence, and on the

day of their departure Dominique was still ignorant towards which part of the Murray valley the expedition was directed.

"It appears to me," said he for the last time, "that it would only be simple justice that I should know where we are going to. I do not understand the reason of all this affectation of secrecy."

"But, my dear Dominique, I have already told you we are bound for the Murray valley. Is not that enough for you? You come along with us, what need is there for any other indication?"

"That is all very well," growled the sailor, "but you mistrust me, and you are wrong."

Two days afterwards the travellers reached the mountains which cover Melbourne on the north, and they advanced into a narrow valley watered by an affluent of the Yarra-Yarra. Hardly had they entered it than Daniel recognised the spot where good "Mr. Friday" had left them.

"The day we first arrived in this place," said he to the sailor, "little did we suspect that we were so near to one of the important cities of the world. We still thought we were in one of the South Sea Islands with no inhabitants except black savages."

"And to think that they have given this hill the name of Mount Disappointment!"

exclaimed Penguin, who was tracing their route on the map. "I shall alter the name to that of Mount Providence, for never did I more clearly comprehend that it was Providence which led us through all our dangers to the city where duty called us."

"Providence," growled Dominique, "had nothing to do with it; but it is inexplicable how you could have been saved by a savage, for the aborigines are, as I have been told, exceedingly cruel, and the white man's natural enemies. If we meet with any of them we shall do well to keep them at a distance with our firearms."

"That is the way," said Penguin. "The Europeans complain of the cruelty of the aborigines, and when they meet them they shoot at them without further explanation. The savages are no worse than other men if you treat them kindly and honourably. We in Canada have made brothers of the Indians who live amongst us, and these former savages are not the least useful citizens of our young confederation, while in the United States the same Indians have been ill-treated by the Yankees, and have remained their intractable enemies."

The little band took several days to traverse these wild and desert mountains, but beyond them the travellers found

beautiful plains covered with pasture, where magnificent herds of oxen kept by European shepherds were grazing in great numbers. In fact, while the gold-diggers

certain death. He never ceased complaining, and on several occasions he declared that he would not advance a step farther into a country where he was likely to

about face and return to Melbourne as fast as I can."

But, as Penguin had told him, after a long day's march on the morrow they reached the great Australian river. Its blue waters rolled on between high sandy banks. The travellers greeted them with a unanimous hurrah. The water was not very deep for that time of year, and finding a ford practicable for the mules, they encamped for the night on the right bank of the river.

Two days later, as they followed its course, they were stopped by a large river which came to mingle its muddy waters with the crystal stream of the Murray. It was the Murrumbidgee. They crossed it with difficulty, for the current was rapid and the bed rather deep.

Arrived on the opposite bank, while Dominique stormed and shook his clothes, which had been wetted by the water, the two cabin-boys, seized with transports of joy, began to dance about and throw their caps into the air. "Has the bath sent you mad?" growled Dominique. "I cannot see what you find so pleasant in this frightful place. For my part, I should much prefer—"

"Be quiet," said Daniel; "we do not want to know where you would prefer to be, for in a minute or two you will be as happy as we are."

"Is it?" asked the sailor.

"Yes," said Penguin, "we have arrived, or nearly so."

"Are you quite sure? You are not making fun of me?" exclaimed Dominique, as his eyes brightened.

"Listen," continued the Canadian. "Now, Daniel, let us have the very words of Bastien Moreau."

"Behold the instructions of the gold-digger," said Daniel. "Set out from the point where the Murrumbidgee joins the Murray, descend the right bank of the river for about six hundred paces as far as a narrow stony ravine, the entrance to which is concealed by some gum-trees, then turn your back on the river, ascend towards the north, and follow the bottom of the ravine. After a walk of two hours an enormous stone indicates—"

"Indicates what?" demanded the sailor, who had greedily drunk in the words.

"Well, I do not know," said Daniel, "but doubtless the entrance to the mine, the place where we must dig."

"No matter," interrupted Penguin, "we must find out."

"But finally," resumed Dominique, "are you quite sure this is the Murrumbidgee?"

"By the position of the lake we saw three days ago, and by calculating our march along the Murray, I am certain," said Penguin, "that this is really the Murrumbidgee."

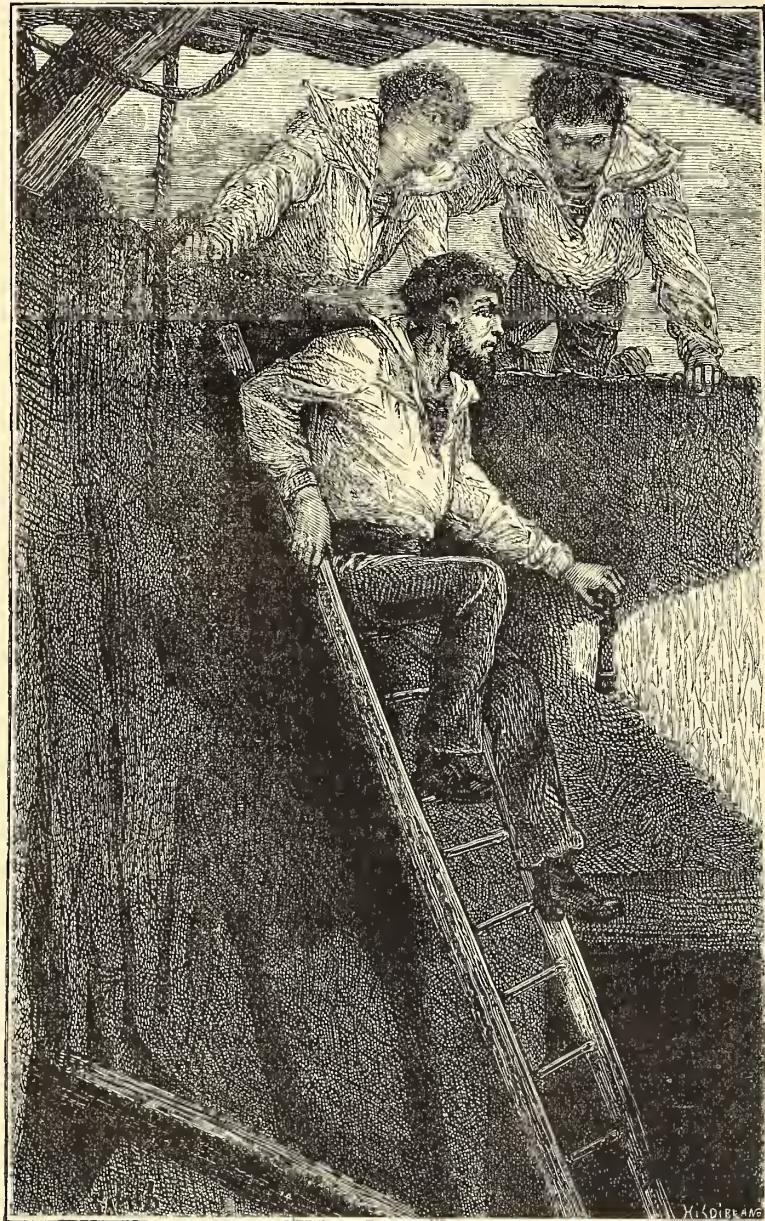
"Well then, boys, let us get on," said the sailor, "and lose no time."

To reach the ravine before nightfall they would have to make haste, for the sun was already nearing the horizon.

Penguin, having stuck a stick in at the corner of the bank which marked the confluence with the Murrumbidgee, began to descend the left of the stream, gravely counting his steps. His two companions followed him, full of that anxiety which is always experienced on approaching an object long and ardently wished for.

They passed several ravines which opened down to the river, and here and there they came to some gum-trees, but Penguin still kept on.

"Six hundred!" he shouted at last, and stopped.



"He uttered a cry of joy."

sought everywhere for the precious metal, the more thoughtful colonists advanced with their flocks into the interior of the country, and possessed themselves without opposition of the vast territories which are now worth more than all the gold ever extracted from the Australian soil. Already in 1865 these true pioneers of civilisation had penetrated into the upper valley of the Murray, and had there settled with hundreds of thousands of oxen, sheep, and horses. The travellers easily succeeded in

pitching themselves in these plains, and more, the shepherds put them on the best road to the lower river. To follow this they had unfortunately to turn their backs on the smiling fields, and to quit the green pastures for the arid desert.

The two cabin-boys advanced without alarm into these silent solitudes, which they had so lately braved, but Dominique manifested a childish terror. It seemed to him that the lads were dragging him to

perish from heat, from thirst, and perhaps from hunger.

However, after a journey of three weeks the little troop reached a considerable lake, the sight of which caused the boys to shout with delight.

"It is Lake Tyrrell," exclaimed Penguin. "By bearing a little to the east we shall be to-morrow on the banks of the Murray, which must be about thirty miles off."

"Now, Dominique, pluck up your courage," said Daniel. "Look at the map, and you will see that we are not deceived."

"The map! The map!" said the sailor. "What would you have me see there? If it was a chart it might do, for I could recognise the soundings; but how do I know that this lake is really the one you say it is? It is not the first wretched-looking lake that we have come across, the country is full of them, and their water is nearly as salt as the sea. Listen! If I do not see your famous Murray to-morrow I shall right

The bank here was high and steep, and without any depression.

The Canadian resumed his march. He counted up to seven hundred and then stopped again; about ten yards off a clump of trees half hid a narrow fissure in the bank.

"I see what it is," he exclaimed; "my steps were shorter than Moreau's, but I am sure we see it there."

He ran towards the trees, followed by his companions. This time there was no room for doubt. Behind the gum-trees there was a narrow, deep ravine.

Suddenly Daniel called out to his companions, who were already moving towards the centre of the creek, and he showed them the letters B. M. cut in the bark of one of the trees.

"Here is the signature of Bastien Moreau," he said. "You see we have made no mistake. We had better content ourselves with this for to-day; night is coming on, and you know that two hours' march is before us if we wish to reach the big stone."

The travellers then halted at the foot of the gum-trees for the night, but, though almost overcome with fatigue, they had but little rest. The knowledge that they were at the gate of their Eldorado kept them wakeful, feverish, and impatient.

At the first signs of the dawn they were afoot, and driving the mules before them up the narrow gorge. It was more of a crack in the rocks than a ravine, and with its smooth perpendicular faces separated one from another by a space of only a few yards, looked as though some mighty force had cleft the chasm. Through these masses of rocks ran long winding veins of that milk-white quartz which is the matrix of the king of metals.

"One need not be a conjuror to see that there is gold hereabouts," said Dominique to his companions, pointing out these shining stripes.

"Perhaps," replied Penguin, "but you have got to find it. Gold is found in quartz, but all quartz does not contain gold."

The bottom of the ravine, as it left the river, gently rose so as to reach the level of a narrow valley, which it again descended, and then it widened towards the north-east as if it were about to return to the Murrumbidgee.

Two hours after leaving the gum-trees the travellers passed this angle and debouched on the valley, the centre of which was the bed of a dried-up torrent. On the banks were thick bushes of thorny brushwood, here and there overtopped by an isolated acacia with light foliage and reddish flowers. Huge blocks of stone encumbered the torrent bed.

The lads were already asking themselves how, amid this picturesque chaos, they could identify the big stone of Bastien Moreau. But their anxiety was of short duration. Before them was an enormous isolated rock which, thrown across the stream, completely barred its course. In the rainy season the water, kept back by the powerful obstacle, would form a cascade, and even now there was a little pool behind the natural dyke. The enormous block was evidently the big stone of the gold-seeker.

"It is more than two hours since we started," said Daniel; "we must have reached the spot, for nowhere below us do I see a larger stone than this."

"Well, let us look about for the mine," said Dominique.

"Have a little patience," remarked Penguin. "As it is obvious that we have

reached the spot, let us pitch our camp here at the corner of the pool, and unload the beasts, who are tired by the journey over the rocks. Let us rest ourselves."

"You are never in a hurry," said the sailor, with a sneer. He had gradually discontinued his obsequious politeness towards the Canadian.

"In the first place," continued Penguin, "it is by no means certain that we shall discover the mine immediately. We only know it is in this valley. But where? That is the question, and there is no need to hurry ourselves."

However, leaving the lads to unload the mules and get the camp ready, Dominique commenced at once to hunt for the mine. He minutely examined the bushes on both banks for a large radius round the rock, but after half an hour he returned without having discovered anything.

On seeing his discomfited look Penguin could not help laughing.

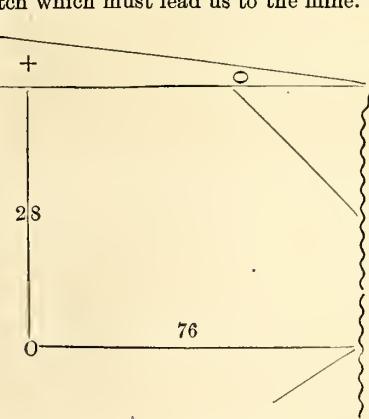
"You see, Dominique," he said, "if you would only think a little, that Bastien Moreau would scarcely have been fool enough to leave his treasure open to the first comer. Before he left the valley he would carefully hide the shaft of his mine—so carefully, indeed, that he was not sure of being able to find it himself, and so he thought it necessary to prepare a plan of his works."

"Ah!" said the sailor, "and this plan?"

"This plan," coolly continued the Canadian, "I have got here, and it has never left me since the day Daniel entrusted it to my care."

And, to the amazement of Dominique, he drew from his waistcoat the fragment of paper, which he carefully unfolded and laid on the rock. Daniel came near to examine it with him.

"Unfortunately," resumed Penguin, "Bastien's memorandum has been torn after the words, 'an enormous stone which indicates.' A little farther on, it is true, there remains the fragment of a sentence, 'which is buried at twenty-eight feet,' but this can refer only to the depth of the mine shaft. At the bottom of this paper we find a very important indication, a plan, also unfortunately imperfect. Behold it. It is this sketch which must lead us to the mine."



"Hum!" said Dominique. "If you reckon on that thing—"

"Yes," said Daniel, "but we do reckon on this thing. At first I could understand nothing about it, but I believe Martial has found the key of the mystery."

"We are going to see," said Penguin. "In the first place, I suppose that the cross marked on the plan is the large stone near us. It is obvious that the two lines which enclose this cross represent the torrent, whose bed gradually enlarges. As I see a

point marked in the narrower part of the bed, I suppose that the mine must be situated above the rock and on the left side of the torrent, since the lines run in that direction. This being taken for granted, I find another point united to the cross by a perpendicular line, and with the figures 28, which must mean 28 yards or 28 feet. This point serves, I think, only as a guiding mark, for it is united to another point which we do not see by a line, on which is placed the number 76. Now this other point must be the site of the shaft, for it is united by another line, unfortunately incomplete, to the point above. Is this clear?"

"I cannot understand it," said Dominique, completely disconcerted.

"I understand it very well," said Daniel.

"I cannot explain myself very clearly," continued Penguin, "but I think I am right. At all events, let us try and put my plan into execution, and if it does not succeed we will try some other."

The cabin-boys had pitched their tent on the right bank of the torrent at a short distance from the rock.

"This tent," said the young Canadian, "will serve as a base of departure. Let us turn our backs on it. Now, Dominique, march forward and count your steps. Your legs are longer than mine, and will give us a better measure."

"Let us take our tools with us," said Daniel, "we may want them."

The sailor stepped out in the direction indicated by Penguin. At the twenty-seventh pace he was stopped by a large acacia, which shot up alone in the midst of the underwood.

"That is right," said the Canadian. "There can be no doubt that that tree represents the second point on the plan. Now you have got to count seventy-six paces parallel to the right bank of the stream."

Without saying a word Dominique resumed his march. Daniel counted his paces in a loud voice. At number 76 Penguin stuck a stick into the ground.

"Well," exclaimed the sailor, in a disappointed tone, "where's the mine? I see around me only stones, bushes, and again more stones, and not the slightest trace of a shaft. I am afraid I shall have nothing but these for my trouble and expense. I must have been mad to have allowed myself to be enticed into the middle of the desert by a couple of hare-brained boys without a word of explanation!"

The Canadian made no answer. He was studying Bastien's plan and comparing it with the ground.

"Now then!" continued Dominique, choking with rage, "this is too much! There you stand like a pair of posts, as if it was the most natural thing in the world. I warn you that if you have hoaxed me I shall know how to be revenged!"

"Don't get excited," said Daniel; "do you not see that Martial knows what he is about?"

"Yes," said the Canadian, "I am sure that the mine must be situated hereabouts, perhaps under our feet, but in any case not far off. Hallo! look at that dead tree by the side of the torrent lying on the ground. I'll wager that is the fourth point in our plan. If so, the mine is here. We have our picks; let us try the ground round this stick, we shall have plenty of time to complain if we find nothing."

The three sailors set to work to open up the soil around them, but many hours passed without result. The labourers had

to suspend their work, and Daniel ran to the tent for some food to restore their strength.

Dominique, silent and scowling, was seated on a slight elevation formed of blocks of stone brought together by the overflowing of the torrent. He was lost in thought, but the nervous movement of the pickaxe he held in his hand betrayed the rage which brooded in his heart. The heavy iron implement, unconsciously raised, made the sparks fly from some quartz fragments as it fell.

Penguin was seated near the sailor, and as he ate a piece of biscuit, quietly watched him.

"He will soon get tired of it," he whispered to Daniel, who kept by his side. "Your dear friend Martigues does not seem to be a very patient man, and I—"

He suddenly interrupted himself, rose, and before Dominique had time to resist him, snatched the pick from his hand and vigorously began to attack the ground at his feet, at the same time exclaiming,

"See! here we are!"

"What do you mean?" asked the sailor.

"I mean to say that instead of fuming away there you had better set to work. You are sitting on the mine!"

"How so?" said Daniel.

"Do you see this piece of wood?" continued the Canadian.

"Yes," answered his companions together.

"Well, this is the end of one of the planks with which Bastien closed the entrance to his shaft. He has covered the plank with earth and stones, and that is why its presence almost escaped us."

A few vigorous strokes with the pickaxe uncovered a part of the piece of wood, and almost immediately they heard the sound of lumps of stone falling down the shaft through the spaces between the flooring boards.

Doubt could no longer exist. Dominique could not restrain his joy. He embraced

the young Frenchman several times, and then, a little ashamed of himself, he extended his hand to Penguin.

"There's no offence taken, is there?" he said.

"Why should I blame you with your impatience?" said the Canadian. "Set to work."

In spite of all they could do it was a long and awkward business, and night approached when they got the rubbish right away and drew the planking from the mouth of the black, yawning shaft.

"It is too late to do anything more today," said Daniel.

But Dominique was not of that opinion. He wished, as if the better to assure himself of the reality, to plunge into the shaft, at the bottom of which the treasure was to be found. He ran to the tent and returned with a lamp and some ropes. Having lighted the lamp, he explored the opening of the shaft, and uttered a cry of joy on discovering at his feet the end of a long ladder which led down into the cavity.

"Your friend Bastien," said he to Daniel, "has had the foresight to leave his ladder in position; that renders it unnecessary for us to use our ropes, and will be safer and more convenient."

The ladder, made of the wood of the gum-tree, appeared to be by no means firm, and began to creak in a threatening manner when the sailor put his foot on it. However, this did not stop Dominique, who, lamp in hand, cautiously descended the shaft. Arrived at the bottom without any stoppage, he called to the two cabin-boys, who slid down the sides of the ladder and joined him in the twinkling of an eye.

The excavation, about three yards wide at the entrance, formed a sort of cave, descending to a depth of about six-and-thirty feet, and being only two yards wide at the base. This shaft, cut through the solid rock, must have cost Moreau and his companions weeks of labour. Below the rock bed, however, there existed a more yielding

stratum, through which the water percolated, and formed a shallow puddle on the floor of the mine. At the bottom of the shaft a gallery was opened extending for about twenty paces, with its sides struttured with planks and the trunks of trees.

The three companions entered this gallery. They attentively examined its extremity with the lamp, but they found no trace of a metallic vein. A block of quartz of sparkling whiteness closed the passage and promised hard work to those who wished to pierce it.

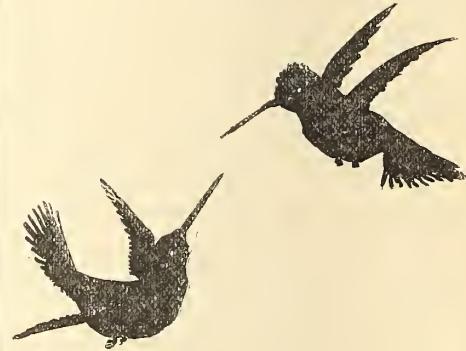
The excitable Daniel was a little disappointed; he thought of finding at the bottom of the mine a treasure in ingots of gold ready to be carried away. Dominique, who had had some experience of mining-work, was more reasonable.

"We shall have to indulge in a few hard knocks with our pickaxes before we get anything," he said.

"Yes," replied Penguin, "and so the best thing we can do at present is to go to bed. For my part, I can hardly move."

They then came up and gained their tent, and after feeding the mules they lay down to sleep side by side, and were soon deep in their golden dreams.

(To be continued.)



THE FIFTH FORM AT ST. DOMINIC'S:

A PUBLIC SCHOOL STORY.

BY THE AUTHOR OF "THE ADVENTURES OF A THREE GUINEA WATCH," ETC.

CHAPTER XXIV.—THE RESULT OF THE EXAMINATION.

THE adventures of the morning did not certainly tend to make the Fifth think better of Oliver Greenfield.

Had he appeared before them humble and penitent there were some who even then might have tried to forgive him and forget what was done. But instead of that he was evidently determined to brazen the thing out, and had begun by snubbing the very fellows whom he had so deeply injured.

Wraysford felt specially hurt. It had cost him a good deal to put on a friendly air and speak as if nothing had happened; and to find himself scorned for his pains and actually avoided by the friend who had wronged him was too much. But even that would not have been so bad had not Oliver immediately gone and made up to Simon before all the class.

Wraysford did not remain to join in the chorus of indignation in which the others indulged after morning school was over. He left them and strolled out dismally into the playground.

He must do something! He must know

one way or the other what to think of Oliver. Even now he would gladly believe that it was all a dream, and that nothing had come between him and his old friend. But the more he pondered it the more convinced he became it was anything but a dream.

He wandered unconsciously beyond the playground towards the woods on the side of the Shar, where he and Oliver had walked so often in the old days.

The old days! It was but yesterday that they had last walked there. Yet what an age ago it seemed! and how impossible that the old days should ever come back again!

He had not got far into the wood when he heard what seemed to him familiar footsteps ahead of him. Yesterday he would have shouted and whistled and called on the fellow to hold hard. But now he had no such inclination. His impulse was to turn round and go back.

"And yet," thought he, "why should I go back? If it is Oliver, what have I to feel ashamed of?"

And so he advanced. The boy in front of him was walking slowly, and Wraysford soon came in view of him. As he expected, it was Oliver.

At the sight of his old friend, wandering here solitary and listless, all Wraysford's old affection came suddenly back. At least he would make one more effort. So he quickened his pace. Oliver turned and saw him coming. But he did not wait. He walked on slowly as before, apparently indifferent to the approach of anybody.

This was a damper certainly to Wraysford. At least Oliver might have guessed why his friend was coming after him.

It was desperately hard to know how to begin a conversation. Oliver trudged on, sullen and silent, in anything but an encouraging manner. Still Wraysford, now his mind was made up, was not to be put from his purpose.

"Noll, old man," he began, in as much of his old tone and manner as he could assume.

"Well?" said Oliver, not looking up.

"Aren't we to be friends still?"

The question cost the speaker a hard effort, and evidently went home. Oliver stopped short in his walk, and looking full in his old friend's face, said,

"Why do you ask?"

"Because I'm afraid we are not friends at this moment."

"And whose fault is that?" said Oliver, scornfully.

The question stung Wraysford as much as it amazed him. Was he, then, of all the fellows in the school, to have an explanation thus demanded of him, from one who had done him the most grievous personal wrong one schoolboy well could do to another?

His face flushed as he replied slowly,

"Your fault, Greenfield; how can you ask?"

Oliver gave a short laugh of contempt, and then turned suddenly on his heel, leaving Wraysford smarting with indignation, and finally convinced that between his old friend and himself there was a gulf which now it would be hard indeed to bridge over.

He returned moodily to the school. Stephen was busy in his study getting tea.

"Hullo, Wray," he shouted, as the elder boy entered; "don't you wish it was this time to-morrow? I do, I'm mad to hear the result?"

"Are you?" said Wraysford.

"Yes, and so are you, you old humbug. Noll says he thinks he did pretty well, and that you answered well too. I say, what a joke if it's a dead heat, and you both get bracketed first."

"Cut away now," said Wraysford, as coolly as he could, "and don't make such a row."

There was something unusual in his tone which surprised the small boy. He put it down, however, to worry about the examination, and quietly withdrew as commanded.

The next day came at last. Two days ago, in the Fifth Form at any rate, it would have been uphill work for any master to attempt to conduct morning class in the face of all the eagerness and enthusiasm with which the result of the examinations would have been looked for. Now, however, there was all the suspense indeed, but it was the suspense of dread rather than triumph.

"Nevermind," said Ricketts to Pembury, after the two had been talking over the affair for the twentieth time. "Never mind; and there's just this, Tony; if Wray is only second, it will be a splendid win for the Fifth all the same."

"I see nothing splendid in the whole concern," said Pembury. And that was the general feeling.

Oliver entered and took his accustomed seat in silence. No one spoke to him, many moved away from him, and nearly all favoured him with a long and unfriendly stare.

All these things he took unmoved. He sat coolly waiting for class to begin, and when it did begin, any one would have supposed he was the only comfortable and easy-minded fellow in the room. The lesson dragged on languidly that morning. Most of the boys seemed to regard it as something inflicted on them to pass the time rather than as a serious effort of instruction. The clock crawled slowly on from ten to eleven, and from eleven to half-past, and every one was glad when at last Mr. Jellcott closed his book. Then followed an interval of suspense. The Doctor was due with the results; and was even now an-

nouncing them in the Sixth. What ages it seemed before his footsteps sounded in the passage outside the Fifth!

At last he entered, and a hush fell over the class. One or two glanced quickly up, as though they hoped to read their fate in the head master's face. Others waited, too anxious to stir or look up. Others groaned inwardly with a sort of prophetic foresight of what was to come.

The Doctor walked to the desk and unfolded his paper.

Wraysford looked furtively across the room to where his old friend sat. There was a flush in Oliver's face as he followed the Doctor with his eyes; he was breathing hard, Wraysford could see, and the corners of his mouth were working with more than ordinary nervousness.

"Alas!" thought Wraysford, "I don't envy him his thoughts!"

The Doctor began to speak.

"The following are the results of the various examinations held on Monday. English Literature—maximum number of marks 100. 1st, Bullinger, 72 marks; 2nd, West, 68; 3rd, Maybury, 51; 4th, Simon, 23. I'm afraid, Simon, you were a little too venturesome entering for an examination like this. Your paper was a very poor performance."

Simon groaned and gulped down his astonishment.

"I say," whispered he to Oliver, who sat in front of him, "I know it's a mistake: you know I wrote five cantos about the Shar—good too. He's lost that. I say, ha! I better tell him?"

Oliver vouchsafing no reply, the unfortunate poet merely replied to the head master's remarks, "Yes, sir," and then subsided, more convinced than ever that St. Dominic's was not worthy of him.

"The Mathematical Medal—maximum number of marks 80. 1st, Heath, 65; 2nd, Price, 54; 3rd, Roberts, 53. Heath's answers, I may say, were very good, and the examiners have specially commended him."

Heath being a Sixth Form man, this information was absolutely without interest to the Fifth, who wondered why the Doctor should put himself out of the way to announce it.

"The Nightingale Scholarship."

Ah now! There was a quick stir, and then a deeper silence than ever as the Doctor slowly read out,

"The maximum number of marks possible, 120. First, Greenfield, Fifth Form, 112 marks. And I must say I and the examiners are astonished as well as highly gratified with this really brilliant performance. Greenfield, I congratulate you as well as your classfellows on your success. It does you the very greatest credit!"

A dead silence followed this eulogium. Those who watched Oliver saw his face first glow, then turn pale, as the Doctor spoke. He kept his eyes steadily fixed on the paper in the head master's hand, as if waiting for what was to follow.

The Doctor went on,

"Second, Wraysford, Fifth Form, 97 marks, also a creditable performance."

One or two near Wraysford clapped him warmly on the back, and throughout the class generally there was a show of satisfaction at this result, in strange contrast with the manner in which the announcement of Oliver's success had been received.

Still, every one was too eager to hear the third and final announcement to disturb the proceedings by any demonstration just now.

"Loman, Sixth Form—" and here the Doctor paused, and knitted his brows.

"Loman, Sixth Form, 70 marks!"

This finally brought down the house. Scarcely was the Doctor's back turned, when a general clamour rose on every hand. He, good man, set it down to applause of the winners, but every one else knew it meant triumph over the vanquished.

"Bravo, Wray! old man. Hurrah for the Fifth!" shouted Bullinger.

"Ninety-seven to seventy. Splendid, old fellow!" cried another.

"I was certain you'd win," said another.

"I have not won," said Wraysford, drily, and evidently not liking these marked congratulations; "I'm second."

"So you are, I quite forgot," said Ricketts; then turning to Oliver, he added, mockingly,

"Allow me to congratulate you, Greenfield, on your really brilliant success. 112 marks out of 120! You could hardly have done better if you had seen the paper a day or two before the exam! Your class, I assure you, are very proud of you."

A general sneer of contempt followed this speech, in the midst of which Oliver, after darting one angry glance at the speaker, deliberately quitted the room.

This proceeding greatly irritated the Fifth, who had hoped at least to make their classfellow smart while they had the opportunity. They greeted his departure now with a general chorus of hissing, and revenged themselves in his absence by making the most of Wraysford.

"Surely the fellow won't be allowed to take the scholarship after this?" said Ricketts. "The Doctor must see through it all."

"It's very queer if he doesn't," said Bullinger.

"The scholarship belongs to Wray," said Braddy, "and I mean to say it's a blackguard shame if he doesn't get it!"

"It's downright robbery, that's what it is," said another; "the fellow ought to be kicked out of the school!"

"I vote some one tells the Doctor," said Braddy.

"Suppose you go and tell him now, yourself," said Pembury, with a sarcastic smile; "you could do it capitally. What do you say?"

Braddy coloured, Pembury was always snubbing him.

"I don't want to tell tales," he said. "What I mean is, Wraysford ought not to be cheated out of his scholarship."

"It's a lucky thing Wray has got you to set things right for him," snarled Pembury, amid a general titter.

Braddy subsided at this, and left his tormentor master of the situation.

"There's no use our saying or doing anything," said that worthy. "We shall probably only make things worse. It's sure to come out in time, and till then we must grin and bear it."

"All very well," said some one, "but Greenfield will be grinning too."

"I fancy not," said Pembury. "I'm not a particular angel myself, but I've a notion if I had cheated a schoolfellow like this, I should be a trifle off my grinning form; I don't know."

This modest confession caused some amusement, and helped a good deal to restore the class to a better humour.

"After all, I don't envy the fellow his feelings this minute," continued Pembury, following up his advantage.

"And I envy his prospects in the Fifth still less," said Ricketts.

"If you take my advice," said Pembury, "you'll leave him pretty much to himself. Greenfield is a sort of fellow it's not easy to score off; and some of you would only make fools of yourselves if you tried to do it."

Wraysford had stood by during this conversation torn by conflicting emotions. He was undoubtedly bitterly disappointed to have missed the scholarship; but that was as nothing to the knowledge that it was his friend, his own familiar friend, who had turned against him and thus grievously wronged him. Yet with all his sense of injury he could hardly stand by and listen to all the bitter talk about Oliver in his absence without a sense of shame. Two days ago he would have flared up at the first word, and given the rash speaker something to remember. Now it was his misery to stand by and hear his old chum

abused and despised, and to feel that he deserved every word that was spoken of him!

If he could only have found one word to say on his behalf!

But he could not, and so left the room as soon as it was possible to escape, and retired disconsolately to his own study.

As for the Fifth, Pembury's advice prevailed with them. There were a few who were still disposed to take their revenge on Oliver in a more marked manner than by merely cutting him; but a dread of the tongue of the editor of the "Dominican," as well as a conviction of the uselessness of such procedure, constrained them to give way and fall in with the general resolution.

One boy only was intractable. That was Simon. It was not in the poet's nature to agree to cut anybody. When the class dispersed he took it into his gifted head

to march direct to Oliver's study. Oliver was there, writing a letter.

"Oh, I say, you know," began Simon, nervously, but smiling most affably, "all the fellows are going to cut you, you know, Greenfield. About that paper, you know, the time I met you coming out of the Doctor's study. But I won't cut you, you know. We'll hush it all up, you know, Greenfield; upon my word we will. But the fellows think—"

"That will do!" said Oliver, angrily.

"Oh, but, you know, Greenfield—"

"Look here, if you don't get out of my study," said Oliver rising to his feet, "I'll—"

Before he could finish his sentence, the poet, who after all was one of the best-intentioned jackasses in St. Dominic's, had vanished.

(To be continued.)



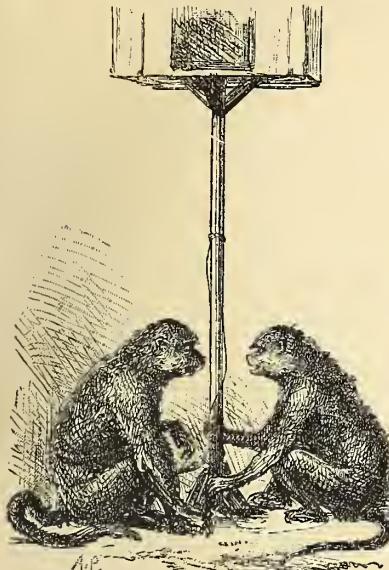
"A great gulf lay between them."

TAMING BABOONS.

By MRS. CAREY-HOBSON.

PART II.

A DAY or two after this they arrived at Jem Mastick's farm, and, according to promise, Charlie was introduced to Jan Bavian and his mate.



A.P.

"I can't say much for old Jan Bavian's beauty," said Jem; "he's about the ugliest baboon I have ever seen."

"Not prepossessing, certainly," said Mrs. Puckeridge, who had had the curiosity to be of the party, though she took care to keep at a respectful distance; "but the smaller one has really a nice face for a baboon."

"Yes, and a kind disposition too. That one would soon become quite tame if it were not for the old savage."

"They are hideous pets at the best," said the lady, turning towards the house. "I wonder you keep them."

"Take care, mother, he hears you; he's tugging at his rope, and he looks spiteful."

Mrs. Puckeridge playfully turned round and shook her parasol at the creature.

"No use, no use, Mr. Bavian; you'll get no compliments from me, and you're only making yourself uglier than ever!"

A snarl, a fierce bark, and then, with a desperate struggle, the brute succeeded in freeing himself from the leathern thong that bound him to the pole and rushed towards her. In a few moments any pretension that *she* might have had to beauty would have been spoilt; but Charlie, quick as thought, to save his mother, sprang at the creature and threw himself upon him.

"Oh, Charlie! Charlie!" screamed the mother, stopping short.

"Get in and shut the door, mother; I can't hold him long!"

"All right!" said Jem Mastick, running up with a chain that he had brought from Natal for the purpose of using instead of the leathern *riem*, "we'll soon have him secure. Get indoors, Mrs. Puckeridge; I did not think the rope would break so soon."

But old Bavian, having regained his liberty, had no intention of being fastened up again, and directly he found that his master was close at hand, he suddenly went down on all fours, almost upsetting Charlie as he scampered off as fast as he could go.

"Let him go," said Jem. "I hope he won't stop till he gets to his old home in the mountains. Nasty-tempered brute! Has he hurt you?"

"Oh! I've got a few scratches; but he got more than he gave. I've learnt how to use my fists in self-defence. I expect he'll have the toothache for a day or two, and perhaps a sore eye."

"I hope he won't come back to be nursed, but I shouldn't wonder if he did."

Just then the other baboon uttered a shrill cry, and it had the effect of bringing Bavian up sharp. He turned round as if to come to his mate, but, seeing Jem still there, he held off, though he kept turning his head about as if looking for something.

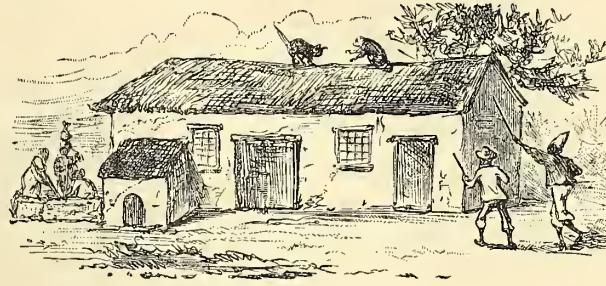
"I wonder what he's going to do now," said Jem; "a bit of mischief, I'll be bound, if he can find it. But I've got my work to do. I shall just put the chain all ready for him, as he doesn't seem to be going altogether, and then be off. If you'll keep an eye on him I'll send one of the black fellows up to try and catch him, for it's not nice to have the brute at large. He's gone round to the back of the wool-shed now."

"We'll have him, the skelm [rascal]!" said two Mantatee men, running up.

One carried a long rope, with a noose, and began climbing up to the roof of the wool-shed.

"Duckie, Duckie, come and be killed!" cried Charlie. "He'll stay there to be caught, don't I just think?"

Mr. Baboon sat a little longer watching his adversary with one eye, while the other seemed to take in all that went on below. For amusement he pulled out the thatch by handfuls and threw it about. The Mantatee was near him now, when up went his tail, and in a trice, springing on the back of the black man and over the other side, with two or three more bounds, was on the ground in the middle of a party of coloured women, who had come out to



Charlie watched, and presently the baboon emerged, carrying something in one arm. He could not at first make out what it was, but he did not remain long in ignorance: it was the eat! and her cries soon let all the world about her know where she was. Charlie picked up some stones and pelted him with them, but, instead of letting her go, he ran up, by means

see the fun. Charlie and the other Mantatee came up quickly to the rescue, while the women ran shrieking and screaming in every direction. However, the baboon, after snapping at two or three of them, still on mischief bent, caught a poor unfortunate hen that had been laying an egg somewhere near by and irritated him by beginning to cackle. He commenced pulling out the poor creature's feathers one by one, but soon came to handfuls.

"You cruel wretch! I should like to pay you out for that!" cried Charlie, as he and the two men chased him round about the homestead.

He was too nimble for them. Dragging the poor screaming hen with him, he managed to keep out of their way till he had plucked her poor body quite bare. The men would soon have put him *hors de combat* with their *knob-kerries* (round-headed sticks), but that their master had told them not to kill him, and they were afraid of disobeying his injunctions. However, Charlie ran off to call him, for the poor hen's tortures were horrible to witness.

"Oh, that's his little game, is it? Well, we must put a stop to that, any way. Perhaps he'll get hold of somebody's baby next. I've got a good charge of fine shot in my gun that'll give him a good peppering. I'll warrant he'll feel pretty stiff after he's got that in his limbs."

When they got out they heard shrieks of laughter, and found it was caused by the queer dancing motions of the poor stripped hen being too much for the risible faculties of the two Mantatees.

of a wall and a lean-to, to the top of the shed, and, sitting on the ridge, began petting and stroking her in the most approved style, evidently mimicking the action of the mistress of the house. But his nails were long and sharp, and the eat did not appreciate the petting. She fought for dear life, scratching and biting,



A.P.

Charlie helping her with the stones, till at last she got away.

"Here, you great, grinning savages, kill that poor creature out of its misery, can't you?"

Throw a knob-stieck at it ; wring it's neck ; anything, but don't stand haw-hawing at the poor creature like that. Where's the baboon ?"

"Gone round the end of house, master."

Yes ! there he was, seated on the front board of the dove-eot, taking out with remorseless cruelty the contents of each nest. All the eggs that were good for anything he carefully broke and sucked out ; the young fledglings all lay quivering on the ground below.

That was the last bit of wickedness he felt inclined to do that day, for, as soon as he received the little hailstorm of shot in his hind quarters he popped his hands down upon the places hurt, and finding there was blood upon them, though but a small quantity, he came down and limped off to his mate, crying like a child.

"I don't pity you a bit," said Charlie. "Serves you jolly well right."

However, his kind little mate did not say so. She received him with open arms, nursed his poor head and patted his poor back, and did all she possibly could to express her sympathy. It was quite touching to see the affection and care that she bestowed upon him.

And he let them all do just as they liked. He was quite tamed, for what with Charlie's "hammering," and Jem's "peppering," he was very ill the next day. Jem and Charlie sponged him well with warm water, extracted all the small shot they could find, and did all they could to ease the poor old fellow and comfort his good little nurse, and even Mrs. Puckeridge was welcomed when she brought all sorts of little dainties to them, for though she still thought them ugly pets, she could not but feel

pity when they looked so subdued, and, as it were, sorry for the past. The kindness was not lost upon old Bavian. He was soon as well as ever, but never evinced the same fierce savagery as before. Now and then he might require a check, but he soon knew how far he might go, and above all he learnt that he must be amenable to the laws of his master.

however, must be manipulated after quite another fashion. Supposing one of these has to be launched, it must be laid flat on a card,

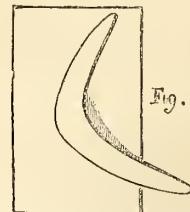


Fig. 3



Fig. 2.

one end of the instrument projecting over the card in such manner that on holding the card horizontally at the lower left-hand corner, the projecting end of the boomerang being smartly filled by the end of the right-hand middle-finger suddenly let off in the manner of a spring, two motions are impressed on the boomerang, one a projectile movement, causing it to fly forward off the card, the other a circular movement. Influenced by the two movements simultaneously, the miniature boomerang flies off into the air and makes some curious movements, which are the instrument's peculiarity.

Supposing it to have plenty of room, and that in its flight it does not strike anything, it will keep rotating, and at the same time rising and falling in a surprising manner, the motions of it ending, if all goes well, in the boomerang's return to the place where it was launched.

This peculiarity of a projected thing coming back to the locality of projection was what surprised those who first landed on the Australian coast and saw boomerang practice by the natives. Description of the thing made it out to be even more curious than the reality. According to sailors' tales, an Australian savage would throw his boomerang at an enemy, or if hunting the quarry, would kill or wound the enemy or the quarry, and then the mysterious boomerang would come back to the savage who threw it. Now this is a fiction. The boomerang only comes back when it has *not* struck anything in its flight. This you will soon discover even with your tiny card boomerangs.

It is easy for a boy to make a large wooden boomerang for himself. I will presently describe how, but before a boy sets about doing this I would advise him to gain considerable practice with small card miniatures ; not that these will aid him in throwing the larger representative, but will help him greatly in guessing at the abruptness of curve, the breadth of blade, and some other particulars which a large boomerang should have, so as to produce its major effect. I have already explained that the abruptness of curve admits of great variations—no calculations can be positively made nor scale-measurements laid down.

These preliminaries stated, we will set about making a large wooden boomerang.

First, as regards the wood. It should be tough and moderately heavy. All things regarded, perhaps ash is about the best wood you can employ, but elm will do. It should be wholly free from knots, flaws, or other imperfections. I suppose there are not many boys who need being told that every sort of wood grows pliable and may be bent if steeped for a certain time in boiling water ; moreover, that wood so bent and kept bent whilst hot maintains when cold the imparted curvature. The so-called Vienna chairs afford a full illustration of this, and for some time this sort of chair has been common enough in England. The artificially bent crooks of certain walking-sticks afford another illustration, so do the abruptly curved bends of plank which enter into the bow of a bluff wooden ship or boat. Well, it follows, then, that having chosen a pole of wood of suitable dimensions, if you keep it plunged well under the surface of boiling water, then remove the wood and bend it to a curve and keep it bent until cold, you may cut longitudinal slices out of it, which slices will retain the original curve. As to the means proper to be used for keeping the original pole bent whilst cooling, this I may leave to your own ingenuity. Should you have

THE BOOMERANG.

HOW TO MAKE AND USE IT.



ERHAPS the Aborigines of Australia are the stupidest, altogether the lowest in the scale of humanity, of all the races we have been brought in contact with in the course of our colonisations. Yet, in spite of this, that Australian native, when first interviewed, was found in possession of two of the most curious projectile weapons that had ever been seen—the sling-spear and the boomerang. The spear, or javelin, thrown by unaided hand effort, is a very obvious weapon. Few nations at one or another period of their history but have used it.

The Roman "pilum" and the Zulu assegai are, except in minor particulars, one and the same weapon. The Australian spear, though a far less deadly thing to look at than either the Roman pilum or the Zulu assegai, being wholly made of wood hardened at the point, whereas both the former are tipped with steel or iron, is in some respects more effective. As for the pilum, this, although projected from the hand, could lay claim to no sort of range, about ten or twelve yards being the limits of its effective projection, and the Zulu assegai for range is not much better. The Australian spear, however, launched by its throwing-stick, can easily transfix a bullock at forty yards from the thrower.

It is not, however, Australian spears and throwing-sticks I promised to make the subject of present confabulation, but Australian boomerangs, projectile weapons even more curious than sling-spears. What put it into my head to write about a boomerang was this—you can make the thing for yourselves, and when made

it becomes a very curious and amusing plaything. The real full-size boomerang is not much smaller than an oriental scimitar, or curved sabre—not unlike the latter, too, in shape. It can only be brought into practice out of doors, and on ground of tolerable dimensions, but there is a miniature boomerang that can be cut out of card and set going in a chamber. I fancy I am the inventor of this, but am not inordinately proud about it.

The miniature or card-paper boomerang is a very puny thing by comparison with the full-grown open-air weapon ; still, as it gives an accurate notion as to what the latter is to be when made, suppose we begin with it.

A miniature card boomerang is here represented in general size and shape, though both

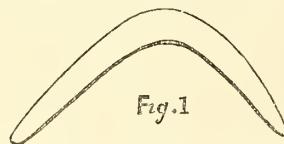


Fig. 1

may vary within a very wide range. If you cut it larger than represented it is hardly likely to be effective, though it may be cut very much smaller ; all this, however, practice will soon teach. An outdoor boomerang is handled just as a curved sabre is, only the hollow curvature the reverse way.

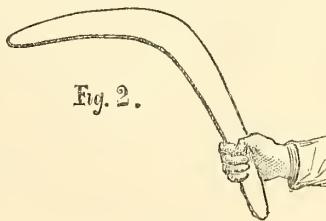


Fig. 2.

And when thrown the motion is by hand and arm, just as when a stick is thrown, the hollow curvature of the boomerang always being launched foremost. Miniature card boomerangs,

access to a heavy blacksmith's vice, the task of giving the set will be very easy, but a moderately ingenious fellow would experience no great difficulty in effecting the bend by rope traction thus.

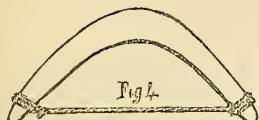


Fig. 4

A carpenter, a cabinet-maker, or a coachmaker would soon do the thing for you, but I am assuming that boys do the thing for themselves.

Assuming the wood to have got cold and the



Fig. 5

bend to be permanent, the next thing will be to cut it into planks with a saw. The planks, when trimmed, will be so many boomerangs. Before trimming they will be rectangular in section, of course, and as for the thickness, there or thereabout the picture here appended will not be found far wrong either as to sectional dimensions or shape. When you have cut out by sawing a simple plank, it can be fashioned by a spoke-shave or a small plane, finishing with sand-paper. A careful and ingenious fellow could almost do all the fashioning with a pocket-knife and rough wood-rasp. Observe that one expanse of the boomerang is flatter than the other, just after the manner of an archery-bow.

* * * *

Come, come! I think it may be assumed that one impetuous young gentleman at least has made himself a boomerang before this time. Let him accompany me to the fields; we will try it.

You know how to handle the boomerang. Grasp it as you would a sword, with the difference that you must keep the boomerang's hollow curve foremost.

We stand on tolerably level ground. Are you quick at judging distances? Look forward, then, to a spot in the ground about a hundred yards away. Now throw the boomerang at that imaginary spot, and we shall soon learn whether the instrument works well. See, there it goes—advancing, and rotating in its advance. And now mark! No longer moving towards the spot at which you threw it, the boomerang soars up like a bird aloft and performs curious pranks. Hold! run aside; the boomerang is coming our way and will soon plump down just where we stood and whence it set out. There! see it does so, and see besides it descends with considerable force; a hit from it would have been unpleasant, and might have been even dangerous. This indeed is the only objection to the boomerang as a toy, but it is an objection easily surmounted when you know the ways of the instrument. You have only to run some little distance when you see it is going to fall, as we did, and the toy weapon may be avoided.

mal that she be led out to breathe the fresh air, and perhaps pick a bit by the wayside, morning and evening. If you have a garden you may lead her about there, only mind the flowers and other horticultural valuables. See that everything you buy for your milch goat is good and sweet, the oats of the best, and the hay not musty. Clover hay, by-the-by, is preferable to meadow hay.

Bean meal is sometimes given to increase the flow of milk, so is oilcake, and as a condiment Thorley's Food for Cattle. These are all worthy of being commended, and so are carrots, potatoes, and turnips.

It is time now to give some hints about dairy arrangements, as from your milk, and perhaps butter, you will expect your profits to arise.

The rules about milking laid down by those who have made goats a study for years are three, which may be thus briefly stated.

1. Milk three times a day, and not twice only, as many do.

2. Milk regularly; that is, at the same hour every day.

3. Always milk the udder dry.

Now how are you to perform the operation of milking? and what utensils do you require? The first of these questions is one which it is not very easy to answer on paper, so I do not think I shall waste space in trying to do so. The reader will soon get into the knack of it, and must not be discouraged if it should be somewhat tedious work at first. It would be as well if he could get some one who can milk to give him a lesson or two in the outset. Treat the animal with great kindness, and let her have something to eat while you are removing the milk. A little food and coaxing goes a long way in making a goat stand patiently while being milked.

In all the best cow dairies the udder is sponged clean before milking proceeds, and the dairyman has clean hands himself. This prevents sediment, and sediment in milk is a thing that will hardly bear thinking about. Lubrication of the teats with the first few drops of milk that flow makes the operation more easy both to yourself and the goat.

As to the utensils to be used for dairy purposes, I need say little beyond stating that they are precisely similar to those used by cow-keepers—a broad-bottomed wooden milking-pail, broad flat earthenware dishes to put the milk in, and a skimmer or tin saucer, a strainer, and so forth.

If the milk is not to be used new, it may be allowed to stand for twenty-four hours; cream will have risen by this time, and from this cream butter may be made. It is probably equally as good as cow's butter, but is paler, and requires the addition of a little annatto to give it the approved appearance. The cream may be churned in a quart bottle, and the butter, when it comes, which it soon does with good shaking, is soft enough to drop out.

Cheese may be made from the milk, but this needs the milk of many goats.

As a matter of course, the goat gives most milk immediately after kidding, and there will be but little decrease for three months at all events.

Goats breed once a year or oftener, carrying the young for five months. She generally produces only two kids, but often three, and sometimes, though seldom, four. Before kidding feed the goat well and tend her carefully in every way, but do not let her get over fat. Do not have her tied up during kidding, but give her a good bed, and when the kids are born a bran mash is usually given, or nourishing sloppy food of some kind. Young kids need fresh air, and will be able to go out after they are a day old. They are weaned when about two months old.

Some goats' skins, especially the long-haired kind, make beautiful mats if properly dressed. To soften them properly, however, they require a deal of hard work and hand-rubbing. For a mat a great degree of softness is not required but if a muff or a Scottish "sporran" is to be manufactured from the skin of a long-haired

goat, it should be as soft as soft can be. Immerse the skin perfectly fresh in a bath of bran and soft water for about thirty hours, then take it out and scrape off every vestige of flesh and fat. You can now stretch the skin on a board, the hair downwards, and rub it over two or three times a day with a saturated solution or mixture of saltpetre, salt, alum, and sulphate of soda; this for two or three days. After it is dry, hand-rubbing and scraping with a rough knife must be vigorously applied. Again and again do it over with the solution, and again and again hand-rub until it is soft and pliant. Softening skins needs a good deal of patience, and a fair supply of what the Scotch call "elbow-grease."

The goat, as my readers well know, is often harnessed in a child's coach. Remembering how self-willed and obstinate the animal is, it stands to reason that his training must be begun very young. I think, too, that a deal more can be done by means of coaxing and kindness than by any kind of rough treatment. Children should be taught this, and taught, also, that the goat is a sentient, sensitive, and thinking animal, and very amenable to good usage. In training goats you must get them used to the bit and the bridle before attaching the reins, and you may get them to draw a log of wood before they are harnessed to a carriage. You must not venture into this carriage too soon, or your overthrow will be a matter of speedy certainty, but walk along beside the animal, holding the reins. Always reward the goat with a few tit-bits when the journey is finished.

These papers would hardly be complete, if I said nothing about the ailments to which goats are at times liable. I must preface my remarks, however, by reminding you that prevention is better than cure, and that the real safeguards against ill-health in your favourite are:—1. Cleanliness. 2. Regularity in feeding and watering. 3. Regularity in milking. 4. Pure air indoors and out. And 5. Exercise.

Colds, with or without coughs, are generally accompanied by some constitutional disturbance, with loss of appetite, running at the nose and eyes, and sneezing. See that the goat-shed is perfectly dry, give double the usual quantity of bedding, a warm mash twice a day, and at first a dose of Epsom salts with a few drops of tincture of ginger in it. One ounce and a half will be enough. A little of Thorley's Food for Cattle will also do good.

Linseed tea as a drench, and thin gruel with some powdered ginger in it, may be given the last thing at night. Put the drench in a bottle, open the mouth, hold up the head, and allow it to pass slowly down the throat.

Diarrhoea, or purging, as I have said already, may, if not checked, go on to dysentery. It is better to begin by giving a dose of castor-oil, say about an ounce or two ounces, made warm. This clears away any deleterious substances that may be lying about the intestines. This medicine alone will often cure the diarrhoea, but some change of diet is desirable. Give no green food for a day or two, but oats, maize, etc., with a little clover or prickly comfrey. If the diarrhoea does not cease, an astringent will be necessary. The following may be given three, or four times a day:—Tincture of opium one dram, tincture of ginger half a dram, prepared chalk two drams, water a sufficient. When the diarrhoea stops, stop the medicine, and feed well and keep warm to restore strength.

Constipation is the reverse of diarrhoea. A small dose of Epsom salts should be given every morning for nearly a week, but the food must be laxative, and the animal must have plenty of exercise.

Inflammation of the udder is a very painful complaint. Epsom salts has a tendency to render the blood less inflammatory, it should therefore be administered; from one to two ounces is the full dose, and it ought to be given in warm water. Bathe the udder frequently in nice hot water, but if the inflammation seems likely to run on to suppuration call in a veterinary surgeon.

THE END.

GOATS AND GOAT-KEEPING,

FOR PLEASURE OR PROFIT.

BY A PROFESSIONAL JUDGE.

PART V.

I HAVE said nothing yet about exercise, but I think it is essential to the health of the ani-

NAUTICUS IN SCOTLAND:

A TRICYCLE TOUR OF 2,446 MILES IN SIXTY-EIGHT DAYS.

BY THE AUTHOR OF "NAUTICUS ON HIS HOBBY-HORSE."

32nd Day.

Portree. Quirang. Staffin Bay. Uig.

8 a.m. The brothers went off, saying, "Good-bye. Very sorry you can't come with us, but we may see something of you; probably you will be arriving as we are coming back."

Five minutes later I followed, and took the first turning to the right. I had not gone far before I espied the dog-cart going slowly up a hill about a mile ahead.

"Ho, ho!" thought I; "if you are not going faster than that, and the road remains good, there is a chance of our seeing the mountain together after all, my friends."

Suiting the action to the thought, I put on a spurt, and gradually overhauled and passed them. This proceeding put the driver on his mettle, for sounds of the whip met my ear, and on coming to a stony bit they shot ahead of me.

When the road improved I again led, and regardless of consequences drove on at my utmost speed. We passed and repassed each other many times during the fifteen miles to Uig, and were neck and neck at the commencement of the slope to the inn. This told in my favour, and I was enjoying some milk and biscuits, and trying to look quite cool and unconcerned, when they drove up to the door a few minutes afterwards.

I was off again, and had got a good start before the fresh horse had been put to.

From the head of the bay the road made a sweeping zigzag to the plateau above, where I turned to the right and struck straight across to the Quirang.

Not seeing the footpath leading to it, I thought I must find a track lower down, and had got half way, when a shout from my friends above brought me to a standstill.

On their beckoning me up, I pushed my machine clear of the road and rejoined them at the top of the hill.

Thence we walked along a path close to the foot of the cliff until abreast of the Needle, when we scrambled up past it into the interior of the mount. After refreshing ourselves at the spring, we climbed on to the celebrated table. If the reader imagines that I am going to describe the wonders of the Quirang in my own words, when the graphic pen of Miss Gordon Cumming has already done so, he is much mistaken. That lady, whose acquaintance I made at Crieff, has given me permission to quote her account, which is as follows:—

"It is a stupendous mass of rock (amygdaloidal trap, black rock speckled with white), the grassy hill ending abruptly in a precipitous rocky face, whence green banks slope down to the sea. Its general form, and that of its neighbour, the Storr Rock, is much the same as the Salisbury Craigs. The Storr has one gigantic detached needle about 160 ft. in height, which stands out clear against the sky like a huge horn. The Quirang, in addition to one giant needle, has a perfect wilderness of huge detached masses of rock of every conceivable form. These are striking enough even when seen in the height of sunshine, but after a rainy night, when fleecy white mists curl and wreath themselves like spirit drapery round each weird form, and vapours steam up from the grass at your very feet until you hardly know where you stand, and every object is magnified tenfold, the feelings of awe and mystery become almost overpowering. Sometimes a fantastic white shroud suddenly hides the whole scene. Then a rift in the cloud shows you the blue sea lying in the calm sunlight far below, dotted with islands and perhaps the white sail of a yacht. Suddenly a fairy hand draws back the curtain, and close to you is a rock like a huge lion

couchant, behind it a tall pillar with a kneeling figure, which reminds one of St. Simon Stylites. Another moment these have disappeared, but in their place three giant figures with curled wigs and flowing robes have slowly emerged from the mist. They are unmistakably a King and Queen and Lord Chancellor, who, however, stands uncourteously *dos à dos* to his sovereign; but facing a solemn and shadowy old Druid

my left tyre was getting shaky, and now on examination I found that it was once more loose all round. Securing it for the present I rode gently down to Staffin Bay, where are a few cottages.

After digesting a very good omelette at the clean little inn, I tramped off to the Kilt Rock. To find this I went along the coast for two miles and a half, crossed the stream which flows out of the loch, and followed it down.

I was very much pleased with the Kilt Rock. Miss Gordon Cumming writes thus about it:

"A wonderful headland known as the Kilt Rock by reason of the many-coloured strata of which it is composed. From the green sea upwards layers of oolite limestone, oolite freestone and shale, alternating with lines of grass, lie horizontally, while rising vertically from these is a great mass of red, brown, and yellow columnar basalt. So high are these pillars that they quite dwarf those of Staffa. Indeed, MacCulloch calculates them to be five or six times the magnitude of those in the wonderful little isle."

The land about Staffin Bay is arable, but although it was now near the end of July, the cereals were only just above the ground. The miserable state of the bothies, and the scanty dress of the people, spoke of dire poverty, but in spite of this they all appeared cheery and well-disposed.

During my tour I had everywhere noticed the fine-looking school buildings. Even in this remote place there was one, and my curiosity was much excited to see how the education here was carried on. I stepped inside and saw two long rows of unkempt heads of hair above the desks, and double the number of bare legs and feet beneath.

The owners of the same showed me their books, and the schoolmaster offered to let them sing. The little dears looked very healthy and merry, but I fear that Burns would not have appreciated their rendering of "Scots wha hae" and "Auld lang syne."

priest who sits gravely guarding his rock sanctuary.

"Geologists say this strange formation is caused by the crumbling away of the shale and softer masses, leaving those that can withstand the wasting-power of the elements."

We had a beautifully clear, calm day for our view. Between the crags we gained delightful peeps of Lewis Island, Cuchullins, and the mainland, where, on looking closely, we could just distinguish a white building nestling among the hills, which we guessed to be Gairloch Hotel.

While gazing on mountain beyond mountain, ridge beyond ridge, extending northward as far as the eye could reach, I was impressed with the magnitude of the task which lay before me.

After enjoying the prospect in peace and quietness for some minutes, up came a squad of outmanoeuvred guides, who had failed to anticipate our early arrival. One old fellow evidently looked upon us as trespassers, and persisted in repeating his formula.

If time had not done so, the incessant cackle of these pests would have driven us away from this spot, where the human voice seems out of place.

On our way down we passed the site of the hut which had once stood there to give shelter, and where also refreshment could be obtained. It had been blown down and never replaced.

We found the ascent and descent easy, but in most instances it must be rather a dangerous undertaking, and as the Quirang, from all accounts, is seldom clear for more than an hour or two at a time, the tourist is recommended to engage a guide to prevent accidents.

I parted from my companions at the foot of the hill, and regained my tricycle. I had now to suffer the consequences of all the bumps during my race. I knew all the time that



On my return to the inn the landlord spoke enthusiastically about some caves near at hand, and I found in the visitors' book a remark to the effect that they were superior to Staffa. This problem I leave future tourists to solve.

I can certainly recommend the Staffin Bay Inn, and it is not such a rainy place as Sligachan or Broadford. On returning there I heard that while I had enjoyed fine weather they had experienced a succession of showers.

On my way back to Uig I had a good sight of the whole range of cliffs of which Quirang is a

part, and I believe they formed the original coast-line, and that their extraordinary excavations are due to the action of the sea and the atmosphere combined.

I was not housed until 9 p.m., and felt that I had done a good day's work. Uig Inn is very small, and I was told off to share a room with

rather a rough-looking customer, but on my remonstrating the arrangements were altered.

Portree to Uig = 15 miles.

Uig to Staffin Bay and back = 19 "

Total ... = 34 "

(To be continued.)

THE ILL-USED BOY; OR, LAWRENCE HARTLEY'S GRIEVANCES.

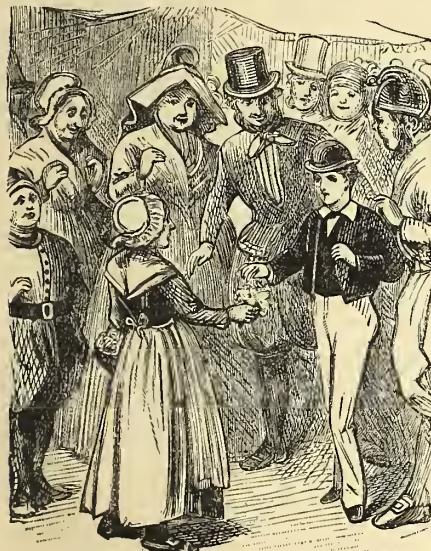
By MRS. FILOART, AUTHOR OF "JACK AND JOHN," ETC., ETC.

CHAPTER XXIX.—A SAD DISAPPOINTMENT.

THERE was such a shout from the crowd—such exclamations of praise and wonder, some in French and some in Flemish, that Lawrence felt rather overcome.

"What on earth are they making such a row for?" he said to himself.

Then the showman came, took the rope in his own hands, and overpowered Lawrence with thanks. If Lawrence had been dressed like many others of the crowd, it is possible that he might have asked him to accept service about the general, for his present possessor was by no means sure that he should ever obtain such a mastery over monsieur as Lawrence had shown that he possessed. None but an English lad could use his fists as Lawrence had done; and grand ideas of the British Boxer in a picture of his booth, teaching monsieur le general the use of the



gloves, passed through the showman's mind.

But Lawrence, unconscious of the glories he might have achieved, was about to step away, when the little woman, who by this time had come to her feet and picked up some of her flowers, came to him.

She addressed him very volubly in German, her native tongue, of which Lawrence knew very little. His French was weak, and his German was weaker, but he understood that she was thanking him for having preserved her from the clutches of the "monster," as she not too politely called monsieur le general. Then she begged of Lawrence to accept one of her bouquets which had suffered least in its fall; and, not to hurt her feelings—since he had so cruelly hurt his own he had begun to think of other people's—he took out a rosebud, and put it in his button-hole.

"Merci!" he said; "bien obligé. There's no need to make a fuss about what I did—glad I was of use. Bon jour, madame," and he hurried away, hoping to be lost in the crowd, who, however, were in no hurry to lose sight of him, but followed his steps, and murmured praises in French and Flemish, as if he was quite a hero in their eyes.

At last he got to an hotel and asked for a bed. Then in the morning he found that his bill would take all his money; and before he could take his railway-ticket he must dispose of his watch, which with some difficulty he did, and then started on his journey.

Now, of economy Lawrence had very little notion; he had come by the best end of the boat; the hotel where he slept had been an expensive one; and though it did occur to him that on so long a railway journey it might be as well to travel second-class, it did not occur to him that the fast trains in Belgium and Germany are very much more expensive than the slow ones, and accordingly he travelled express to Cologne, from whence he journeyed on to Heidelberg, with a feverish impatience to see his mother, and tell her of his grievous disobedience to his uncle and its dreadful consequences.

This is not the time or place to tell you of that glorious Rhineland through which he was hurried along; of the glimpses of rock and river, of grand cathedrals, and picturesque old cities that looked as if they had been built centuries ago and had never altered; of castles and mountains famed in legend and story; of all this in his misery Lawrence took little heed, and we will not dwell upon it now. It is enough to say that, tired and worn out, he presented himself at the English Pension at Heidelberg, only to learn that his mother was no longer staying there, but had left three days before.

And no one knew exactly where she had gone. All that was known was that she had talked of going down the Rhine, staying at Coblenz for a day or two, then going to see one or two other places where she had heard that there were English Pensions and good masters. Any letters that came for her two days after her departure were to be forwarded to Coblenz. After that she could give no directions, as her stay would be uncertain; but it was not very likely—as she had written to her different friends before leaving—that there would be any letters at all to be sent.

His mother had written to him, no doubt, and her letter must have come the morning after he left home.

"Should he go to Coblenz?" he asked himself, as he turned sadly away from the boarding-house.

He did not see how that could be done; he had very little money left—not half enough, he was sure, to pay his way for

any distance, either by the river or the rail. He sat down disconsolately on a bench under some trees by the side of the footpath, and tried to think what he had better do, but all seemed blank, dark misery to him. There he was, helpless and penniless in a foreign land, where no one knew him, and where he could hardly make himself understood in the language.

Should he go to the people at the Pension and state his case, and ask for help?

His pride shrank from that. They would know very little of his mother. She had only been at Heidelberg for a fortnight; it was a large place, and people were always coming and going. They might take him to be an impostor, and at any rate he should have to say how he came there in such a plight, and he could tell his woeful story to no one but his mother. There was one faint hope for him. His mother had promised to write to one lady there, a Miss Robinson, and let her know how she liked the English Pension at Coblenz, and where she thought of staying next. Perhaps a letter from him might reach her before she left that place, and she might send him money to come to her. He wrote at once to her, and then decided he would call on Miss Robinson in the morning, and see if she had heard from his mother.

He would go to an hotel for that night, as cheap a one as he could find. He did not like the idea of staying at the pension; they seemed to look on him so curiously, and ask questions which he resented. So he slept that night in a bed, and found the bill so much that it would leave him no

money to pay for another; but he hoped by the evening to hear from his mother, if his letter had found her at Coblenz.

He called on Miss Robinson, and found that only half an hour before she had left for England. Several letters had come for her by that morning's post; and all that was known of their contents was that one told her of the serious illness of her only sister, and she had



hurried off to her at once. No hope from Miss Robinson. Well, surely he should hear from his mother that evening!

He went to the post-office where he had written his letter, and inquired for the answer he hoped for. It had not arrived—so that there was nothing for him but to wait till the next morning. But where? Not in a bed to-night. He had dined off a small loaf and some apples he had picked up by the wayside. He crept out of the town, found his way to the grassy border of a field, and slept under the trees!

(To be continued.)

BALLOONS AND ALL ABOUT THEM.

BY A PROFESSIONAL AERONAUT AND BALLOON-MAKER.

PART V.

IN big balloons, the most important part of all

THE NETTING.

And I shall now describe the way in which, if you desire to make your model perfect, you must set about this portion of your manufacture, which, however, you can dispense with if you please in a paper gas balloon. As I told you before, there is scarcely any strain whatever on the balloon; in fact you could make a large paper balloon to contain 20,000 cubic feet of gas, and if it were covered with properly fitting net it would, for one ascent, answer the same purpose

as a cambric balloon, the reason for making it of a material at once light and strong being to enable it to stand the wear and tear of laying out, folding, packing, etc. The first thing to be observed in making the net of a balloon is to take the same pattern gore as the balloon itself was cut from. Now draw a longitudinal line through the centre A (Fig. 6), the gore being reduced to two halves. Divide one half by the same rule as that on which you originally cut the pattern gore, the object of this division being to get the meshes of the intended netting reduced to such a small scale that four meshes may cover each gore. Measure on the centre line A, the distance B C, and half as long again. Draw a line parallel to B C from D to E.

Now draw a diagonal line from D to C, which will give you an angle of about sixty degrees. Now cut a templet or set square out of card or thin wood, corresponding with angle C B D, thus (Fig. 7).

Now with line F E on the templet corresponding with line D E in Fig. 6, draw E F, and continue this until you come to the crown—i.e., the part where the valve is fixed. Now draw diagonal lines, similar to B E, all the way up (as shown in Fig. 6), which gives the different sizes of the meshes to be used in forming the net from the equator to the pole; and supposing you have decided to have twelve gores to form your balloon, you would then have forty-eight rows of meshes to go round the balloon, and so on, according to the number of gores of which the balloon is composed.

Now for making the netting from the equator to the hoop, concerning which the following instructions are to be observed. The first set, or

row, of meshes below the equator are to be of the same length as those at the equator with one-fourth added—i.e., one-quarter longer; the second set, or row, of meshes from the equator are to be one-quarter longer than the last; the third set from the equator to be one-third longer than the second set; the fourth set one-third longer than the third set; the fifth set, or row, is called the drawing line, and is one-third longer than the last. Then come the cords, or leading lines, which are fastened to the hoop, to which the car is attached. This is the true way to make a proper balloon net, and on the same principles you may make the meshes much larger by setting them out three to the gore instead of four—indeed, they are often made in this manner for economy's sake—and, instead of having a leading line to each row of meshes, two are frequently blended into one. The material to be used should be the best three-strand Italian hemp netting-line, and you must bear in mind that the meshes at the crown should be very fine, increasing in strength as you go downwards.

The last process in connection with this subject is

THE GAS

with which the balloon is to be inflated. If you refer to the Boy's OWN PAPER of January, 1881, p. 175, you will find an elementary treatise, by Dr. Scoffern, on the apparatus and method of inflating balloons with hydrogen gas, and an illustration of the apparatus; but as I am going more minutely into details, I give you here the quantities of ingredients for generating sufficient gas to fill a given-sized balloon. Thus, for instance—

Diameter of Balloon.	Sulphuric Acid.	Zinc.	Water.	Size of Generator.
24 in.	24 oz.	16 oz.	5 pts.	4 qts.
20 "	14 "	10 "	3 "	4 "
18 "	10 "	6 "	2 "	5 pts.

The zinc and water are put into the generator first and corked down, and connections made with the iron or composite pipe to the purifier, which merely contains water (three parts full), and a small quantity of lime—say, a piece the size of a walnut to a pint of water. Should there be any leakage round the pipe, stop it with loam or clay. Pour the acid into the generator, through the feed-pipe, with a funnel, in small quantities at a time. As the gas passes into the balloon you can tell how quickly it is forming by the bubbling sound which is taking place in the purifier. If you were to pour all the acid into the generator at once you would burst it. When you hear the bubbling noise diminishing add more acid.

Now there is another point you must understand—i.e., to be able to find the cubic capacity in feet a balloon of a given diameter will contain, which is done in the following simple manner:—

Diameter 2 ft. (or 24 in.). Multiply by diameter = 4. Multiply by diameter again, = 8. Now multiply by decimal numbers .5236 = 4·1883.

The same decimal number will apply to any given diameter, and you see by this rule that a balloon of two feet diameter will contain four cubic feet of gas, and that the quantities of ingredients, etc., required are as given above. I hope you will excuse me for taking you to school again, but I am anxious to make this article as complete as possible.

COST.

With reference to the cost of the materials to be used in the construction of balloons, it is obviously impossible to enter into details without knowing the size of the balloon to be constructed. The following general instructions, however, may be found useful.

Strong tissue paper, which measures 20 by

30 inches, costs about sixpence per quire, one quire being amply sufficient for a three-foot balloon.

Scotch cambric, which is 44 inches wide, costs 1s. 2d. per yard, and you will be able to calculate how many yards are requisite for your purpose.

Boiled oil costs about fourpence per pint, half a pint being sufficient to varnish a three-foot paper balloon.

Tissue paper can be had of all colours.

With regard to the netting, which is technically known and must be asked for as "netting line," it varies in size, and costs about two shillings per lb.

With these few remarks I leave you to the construction of your balloon, which I hope you will find an agreeable and not too difficult task.

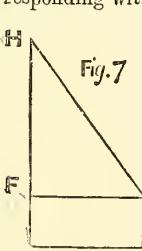
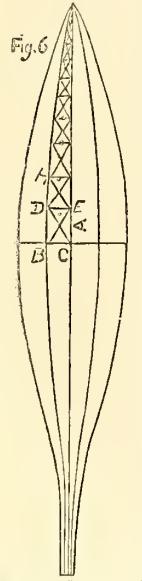
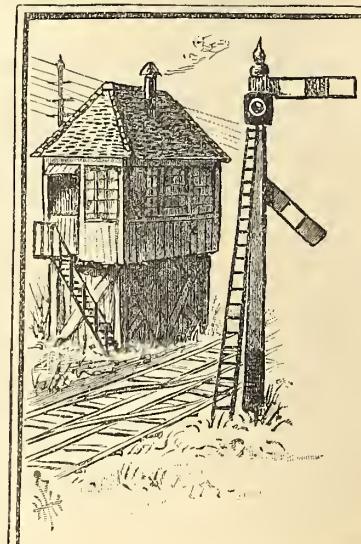
And now perhaps you will forgive me if I wind up with an anecdote which, ridiculous as it may appear, is nevertheless pertinent to the subject as showing the effect of a balloon ascent upon a nervous temperament. On one occasion, not very long ago, a balloon ascent was announced from the Crystal Palace. The balloon was to be piloted by Mr. Wright and myself, and we had invited Mr. B—, manager of certain gasworks, to accompany us. He gladly accepted the invitation on the one condition that we would not tell his wife—of whom, good fellow as he was, he was just a little bit afraid. We promised secrecy, and in due course the ascent was made. When at a considerable elevation some trifling matter had to be attended to, and Mr. Wright, calling to him, said, "B—, just hand Spencer the — [I forgot what]—will you, please?" As B— was stooping to the bottom of the car for the purpose, "Why, man!" cried out Mr. Wright all of a sudden, "take care of the grapnel or we're lost!"

The grapnel, which was hanging in its proper place, had caught the tail of Mr. B—'s coat, which was dangling, where it ought not to have been, outside the car. If the grapnel had become detached, and had gone down the length of the rope with a sudden jerk, the consequences would have been frightful, as was explained to poor B—, who became exceedingly pale, and neither offered any assistance nor stirred from his seat during the remainder of the journey. In bed that night he dreamed a dream, and in his disturbed sleep his talk was of balloons and grapnels.

"Mr. B—," said Mrs. B—, at breakfast next morning, very grimly, "perhaps you will have the kindness to explain to me what reason you had for the very disagreeable dream which disturbed your sleep last night—and mine?"

And poor B—, after a vain attempt to pooh-pooh the matter, was fain to confess his delinquency, and he has never made a balloon ascent since.

THE END.



Our
Prize
competition.

(Continued
from page 375.)

Painting
Competition.—

Water
Colours.

JUNIOR DIVISION.

Prizes.—10s. 6d. each.

R. A. BOWNAS (age 13½), 343, Shoreham Street, Sheffield.

CHARLES A. EVA (age 14), 7, Wellington Terrace, Penzance.

Certificates.

EDWIN F. MILLER, 18, Norwich Road, Ipswich.

JACK DA COSTA, Warwick House, Carlton Road, Southampton.

ARTHUR HUDDART, 29, Inkerman Terrace, Corkickle, Whitehaven.

ALFRED R. BAKER, Rosa Cottage, Lodge Road, Bevois Mount, Southampton.

NOEL LYDON, Elm View, Great Driffield, Yorks.

LEWIS TREWEEK, Perran Wharf, Perranarworthal.

THOMAS S. LONES, South Road, Smithwick, Birmingham.

WILFRED H. THOMPSON, 27, Church Row, Hampstead, N.W.

WILMOT CLIFFORD PILSBURY, The Hawthorns, Knighton Park Road, Leicester.

VERNON E. BARNETT, 3, Percy Circus, King's Cross.

WILLIAM E. COOPER, 10, Downing Street, Manchester.

ARTHUR STANLEY WOHLMANN, Grammar School, Hertford.

EDWARD W. KEEN, 6, Cambridge Terrace, Torpoint, Devonport.

EDWIN R. WILKINSON, 3, Winsley Villas, Montpelier, Bristol.

WALTER FUGE, 4, Albemarle Terrace, Taunton.

FRANCIS H. CRUESS, 2, St. George's Terrace, Branstree, Whitehaven.

WM. WESTLEY MANNING, 21, Redclyffe Gardens, South Kensington.

FRANK DEAN, Victoria Road, Headingley, Leeds.

EVAN W. H. FYERS, 19, Onslow Gardens, South Kensington.

EDWARD JOHN KARN, Leatherhead, Surrey.

HARRY M. HODGSON, 33, Rendlesham Road, Lower Clapton, N.E.

WALDO V. YEOMANS, Lincoln Road, East Peterboro'.

MONTAGUE H. JEPHCOTT, 75, Mostyn Street, Llandudno, North Wales.

JAMES A. BEDFORD, 26, Marcia Road, Old Kent Road, S.E.

JAMES SYMINGTON, 20, Waverley Place, Edinburgh.

CHARLES P. MCGARRY, Milton, Bowling, via Glasgow.

ALEXANDER NICOLSON, 32, North Albion Street, Glasgow.

ERNEST E. RAY, 86, Poplar Walk Road, Herne Hill, S.E.

JAMES STEPHENS, 36, Claredon Street, Camberwell.

JOHN B. PHELPS, 3, Avoca Terrace, Blackrock, co. Dublin.

ARTHUR F. EALEY, 1, Church Street, Coggeshall, Essex.

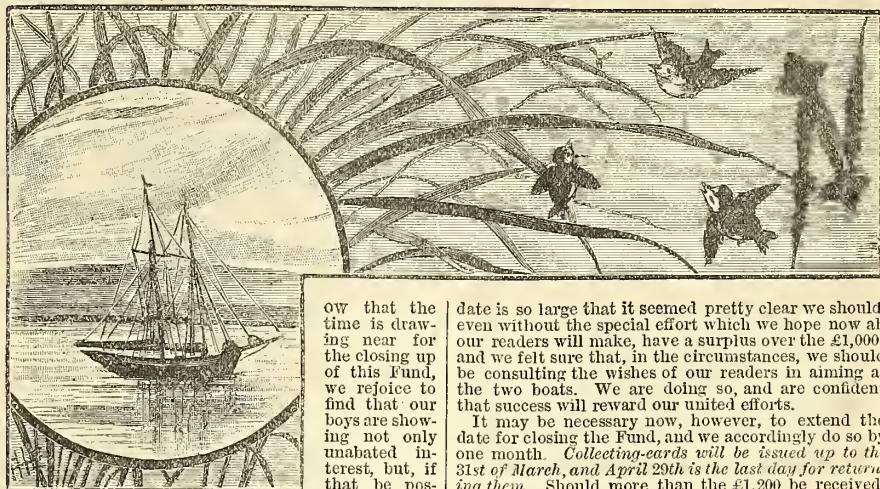
ALLAN H. BRADBURY, 15, Orchard Place, Southampton.

WM. H. BENNETT, Sidmouth Road, Lyme Regis, Dorset.

JOSEPH ATTWOOD, 4, Albert Terrace, Nelson Street South, Birmingham.

PETER J. MOORE, 9, Rehoboth Place, South Circular Road, Dublin.

"Boy's Own" Lifeboat Fund.



increased zeal in working for the object we all have so much at heart.

In our issue for January 28, page 295, we intimated that the time had come when it was well to fix the closing date, and we therefore gave February 28 as the last day for the issue of collecting-cards, and March 31 for their return. We also wrote as follows:—

"If more than the £1,000 necessary for the Lifeboat and Boathouse be realised by the united efforts of our readers, we purpose making it the nucleus of a "Boy's Own" Fund to sustain a Cot, or Bed, or Ward, at one of our Children's Hospitals—an object that we are sure will meet with the approval of all. There our readers could visit the little sufferers, there they could send their surplus toys and books, and thither would go the results of many of our Prize Competitions. But on this subject we shall have more to say by-and-by."

A few days later we consulted with Mr. Lewis, the general secretary, at the offices of the Royal National Lifeboat Institution, as to the building and placing of the "BOY'S OWN" boat, and the result of our conversation may be thus briefly summarised. It was felt by us both that this new lifeboat should be stationed at some place where there would be the opportunity for her doing really effective service; and so it might possibly be found best to use her to replace some inferior boat—which might yet be capable of doing much good elsewhere—at some specially dangerous point; and, in that case, a boathouse would of course be already in existence, suitable, with perhaps but some slight alterations, for her reception. Might it not be possible, Mr. Lewis suggested, to increase our Fund from £1,000 to £1,200, and thus provide two new Lifeboats, which the Institution would gladly house and care for? We thought it might, and determined to look carefully into the matter.

We have now done so, and have decided for the two Lifeboats instead of one. The number of collecting-cards applied for since we announced the closing

date is so large that it seemed pretty clear we should, even without the special effort which we hope now all our readers will make, have a surplus over the £1,000; and we felt sure that, in the circumstances, we should be consulting the wishes of our readers in aiming at the two boats. We are doing so, and are confident that success will reward our united efforts.

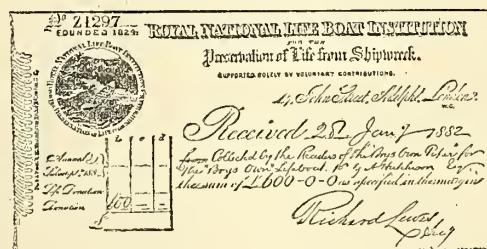
It may be necessary now, however, to extend the date for closing the Fund, and we accordingly do so by one month. *Collecting-cards will be issued up to the 31st of March, and April 29th is the last day for returning them.* Should more than the £1,200 be received, it will go to form the nucleus of the "BOY'S OWN Hospital Fund" already referred to.

We should like all donors and collectors to turn to our last volume (No. 124), and read the notice on pages 567-8. Amongst other things we announced the following:—

"Prizes.—To encourage all workers in this good cause, we purpose giving prizes (to consist of two bound volumes of the BOY'S OWN PAPER, duly signed by the Editor), for the lad not over twenty-one years of age who shall send us up the largest amount in each of the following divisions:—1. London; 2. The English counties; 3. Scotland; 4. Ireland; 5. Wales; 6. The Continent and Colonies; 7. The Public, National, and Board Schools; 8. The Private Schools; and 9. Training Ships, Orphanages, and other public institutions. Then, as there are many of our sisters and young lady cousins who would doubtless like to join in such a noble work, we will allot a 10th prize to them, to be won in the same way."

These prizes we shall of course award when the Fund closes, and it may perhaps encourage our readers if we mention that this is not cur only help towards the good cause. Thus, the whole of the working expenses of the Fund—printing, postage, stationery, clerks, etc., which form a very heavy item, will be borne by the paper; and the whole of the amount received, without a single halfpenny deduction, will go for the philanthropic object for which we are unitedly working.

We have but one other word to say. On January 27 we sent to the Royal National Lifeboat Institution a cheque for £600. This will pay for the first "BOY'S OWN" Lifeboat and all its necessary tackle, including the cork jackets for the crew, etc. The committee acknowledged the receipt in the "Times" and other daily papers, and the building of the boat would proceed forthwith. We understand that some three months would be needful for her construction; and then will come the launch, etc., of which, of course, we shall have more to say by-and-bye. We append a copy of the official receipt of the Institution:—



(Contributions received to January 26th, 1882.)

	£	s.	d.
Amount previously acknowledged ..	853	7	2

Jan. 24.— <i>Per Lallah Rookh</i> (error in acknowledgment, Nov. 18, 1881, 2s.; <i>Per W. G. (Regent's Park)</i> , 5s. 10½d.; <i>Puer (Hastings)</i> , 5s.; <i>Malcolm Don (Hawkhurst)</i> , 10s. 6d.; <i>Per F. W. Nutting (Moseley)</i> , 15s.; <i>Three Town Boys' Gift (Nottingham)</i> , 4s. 6d.; <i>Per J. Hart, jun. (Walworth)</i> , 8s. 1d.; <i>Per E. H. Jefferys (Peckham)</i> , 12s. 7d.; <i>Edward Zell Frobisher (Cressy)</i> , 2s. 6d. ..	3	6	0½
Jan. 25.— <i>Per H. C. Moor</i> , 12s.; <i>Per W.</i>	3	6	0½
Jan. 26.— <i>Per H. R. Mackenzie (Inverness)</i> , 5s. 6d.; <i>Enthusiast</i> , 1s.; <i>Per R. and M. Radcliffe (St. Agnes)</i> , 14s.; <i>E. Murray (Clapton Park)</i> , 6d.; <i>Leycester and John Grey Clarke (Hook Vicarage)</i> , 1s. 6d.; <i>Per E. Chacksfield (Saffron Walden)</i> , 7s. ..	1	9	6
Carried forward ..	£861	8	9



Correspondence.

DICK.—The amateur champion for the mile in 1866 was C. B. Lawes; in 1867 S. G. Scott; in 1868 and 1869 W. M. Chinnery; in 1870 R. H. Benson; in 1871 W. M. Chinnery again; in 1872 C. H. Mason; in 1873, 1874, 1875, 1876, and 1877 Walter Slade; in 1878 A. F. Hills; in 1879 B. R. Wise. When there is only one competitor in a walking or running race he is said to "walk over"; when he is alone in a jumping contest he is said to "jump over."

GOG AND MAGOG.—The London Institution is in Finsbury Square (north side). Apply there for particulars.

HARRY.—A leaping-pole should be made of fir or ash, and be about eleven or twelve feet high, gradually tapering towards the top, and having a steel spike at foot. A run of from fifteen to twenty paces should be taken with the pole held well in front. The pole should be grasped at about the height to be cleared, the hands being about a yard apart. On taking off, the weight of the body is raised by the arms, and the legs go over the bar first, the body being in a straight line with them and following them over. The leaper thus alights facing the side from which he took off, and where he leaves his pole, of which he has let go as soon as he reached the bar. Six feet is the best height to begin with.

NELSON.—No. Flies are insects; they "come from" chrysalides, and chrysalides "come from" eggs. You remind us of the boy who, when informed by his father that "chickens came out of eggs," replied, "Do they, father? I always thought eggs came out of chickens!"

BASILEUS.—When William Lang ran the mile in 4 min. 17 sec., he was 5 ft. 8 in. in height, weighed 9 st. 10 lb., and was in his twenty-fourth year. August 19th, 1865, was the date. Cummings has, as you know by our articles, since beaten his record.

S. M.—You clean tortoiseshell with rouge, rag, and elbow-grease, and you can clean the brass at the same time in the same way.

CAPTAIN NEMO.—Mr. Ballantyne has travelled very considerably. For several years he was out in the Red River district in connection with the Hudson Bay Company. He has since been to South Africa, etc., besides spending a part of nearly every year on the Continent, Norway, etc.

T. R. P. (South India).—The cost of Monthly Parts of the BOY'S OWN PAPER and postage to India will be 12s. per annum. Cash should be sent by money-order, payable at chief office, London, to Mr. Joseph Tarn. We are glad to hear that you find the paper so valuable to you.

JUVENIS PONS REGIS.—1. The cheapest metronome is made by buying a cheap pendulum clock, and lengthening or shortening the pendulum, increasing or decreasing the driving-weight. 2. Nothing. 3. Stacte is the fatty odoriferous liquid which exudes from fresh myrrh or cinnamon. Onycha is an Indian mussel-shell, which, when burnt, gives out an odour like musk.

HARRY PEARCE.—For setting-needles try Cooke, of Museum Street, or Gardner, of Oxford Street.

A CORNISH PLOUGHMAN.—The coin you found is a groat of Philip and Mary, and is of the first coinage after their marriage. The inscription is "PHILIP Z MARIA DG REX Z REGINA," that on the reverse being "POSIMUS DEUM ADVITR: NOS." The Z is the old form of & or ET. The coin is rare, there being very few examples of the silver money of Elizabeth's sister. Show it to the curator of your local museum.

AGATHA DE WINDSOR.—We gave three articles on Lacsse, commencing in No. 122.

EXITIO EST AVIDUM MARE NAUTIS, and T.—The House of Commons is seventy feet long and forty-five feet broad and high. The House of Lords is ninety-seven feet long, and its breadth and height are the same, namely, each forty-five feet. The Clock Tower is forty feet square and three hundred and twenty feet high, and the Victoria Tower seventy-five feet square and three hundred and forty feet high. The central hall is eighty feet high. St. Paul's is four hundred and four feet high.

MIDSHIPMITE.—1. Absent in a cricket score counts the same as out both in the innings and the average. 2. For tools, try Melhuish, of Fetter Lane, or Buck. 3. The Cricket Articles appeared in July, August, and September, 1880.

W. A. BURMAN.—Refer to your English Grammar, and if it is worth anything it will explain the use of the subjunctive mood. If it were not for that mood the "was" would be right and the "were" would be wrong; and it is owing to the awkward look of such sentences that the subjunctive is going out of fashion.

ROSE OF YORK.—If the boy claims the protection of the French Government he must serve in the army, if he claims to be an Englishman he need not do so; but once he has refused the call the French will have nothing more to do with him.

BUCK FROST.—Write to the secretary of the Bicycle Touring Club. We know nothing about it. The distance has been done in nearly half the time.

ALPHA.—If by Queens Regent you mean Queens Regnant, they are Jane, Mary, Elizabeth, Anne, and Victoria, which make five, by the way; but perhaps your man does not count Jane.

J. M. N.—For hints on the use of carpenter's tools try the "Amateur Mechanic," Ward and Lock's "Every Man his own Mechanic," or the "Bazaar" Office "Amateur Carpentry."

POLYPHEMUS (Hurrah! You have given the giant his missing eye!)—Shilling is said by some rash deviators to come from St. Kilian, whom the Wurzburgers put on their coins; but this is doubtful.

JUDY.—You are liable to a heavy penalty for not having the boy's birth registered, and it will be enforced unless you are very careful. Consult some minister or doctor.

YE ALCHEMIST OF THINAIR.—1. Apply to Rudall, Rose, Carte, and Co., Charing Cross. 2. Far better to buy it. It is made by mixing up blacklead, lamp-black, grease, and linseed-oil, and smearing the paper over with the mixture. Carbon paper is very cheap. Manifold-paper is its usual name.

B. D. and A. C. B. BALL.—Every magazine and paper published is compelled by law to give in every number the information you failed to find; and not a number of the BOY'S OWN PAPER or the other publication you mention is issued without it. Not answered because we had no room; it is quite understood that a reply is not obligatory.

UN JEUNE GARCON.—1. Walton Castle, near Clevedon, is a pretentious shell built in the sixteenth century, in imitation of the baronial structures of older date. An octagonal embattled wall, with a round tower at each corner, surrounds a central keep of the same figure, of which part of the bailey remains. The embattled gateway has the Poulett arms (three swords in pile). The botany and geology of the walk to it from Portishead is most interesting. 2. Gone.

3. The fall of shooting stars does not necessarily take place every thirteen years, for more than a hundred systems of meteors are now recognised. There were great displays in the Octobers of 902, 1202, and 1366. Each time the stars are said to have been in motion all night, falling like locusts, and in numbers which no man could count. In November, 1787, and November, 1789, there were also great falls; and 1818, 1822, 1831, and 1832 are all noted for the same thing. The year 1833 is, however, the "best on record."

Together with the smaller shooting stars, which fell like snowflakes, and produced phosphorescent lines along their courses, there were intermingled large fireballs, which darted forth at intervals, describing in a few seconds an arc of 30° or 40°, and leaving behind them luminous trains, remaining in view for half an hour or so. On this night the Falls of Niagara, where the cascade of fire seemed to pour into the roaring cataract of water, are said to have looked their grandest within the memory of man. In 1834, 1835, 1836, 1837, 1838, and 1839 there were brilliant displays; and also in 1841, 1846, 1866, and every following year till 1871. Meteoric astronomy is yet in its infancy, but it promises to afford the key to the true history of the universe.

PETE ET REPERIES.—1. Dean Stanley was the Arthur of "Tom Brown's Schooldays." 2. J. E. K. Studd is the eldest, then comes G. B. Studd, and the youngest is C. T. Studd. 3. No. 4. Cannot say. 5. Mr. W. P. Phillips is the Amateur Hundred Yards Champion. 6. Neither.

NAVIS.—If you are going to make your boat in "bread-and-butter" style, in layers cut out with a fret-saw, use Quebec yellow pine. If you are going to make it out of one piece of wood and hollow it out, use Baltic white fir. Spruce might do, but it is knotty, hard, and heavy; red pine never keeps smooth, Petersburg yellow pine is very unsatisfactory. Kaurie pine is better, and white cedar first-rate. The great thing is for the wood to be even and straight in its grain, and free from knots and shakes. Get our Index numbers, price one penny each, and they will tell you where you can find our practical articles on Model Yacht construction.

ROMAN GLADIATORS.—A correspondent writes: "I feel sure that you will excuse me for pointing out that in your issue of January 28 your illustrator of M. Gerome's picture, 'Doomed to Die,' has fallen into the error of which the artist has also been guilty. At page 290 (col. 2, l. 9) he says, 'the people give the well-known fatal signal by turning down their thumbs.' Now, sir, a moment's reflection will, I am sure, convince you that this statement is misleading, and likely to give your youthful readers a wrong impression of the actual custom. To press down the thumb (premere) was a sign of approbation at play, vide Pliny, xxviii. 2, 5, 'Pollices, cum faveamus, premere etiam proverbo jubemus'; see also Horace, ('Fautor utroque tuum laudabit pollice lumen'), Epist. i. 18. 66, where the custom is fully explained in Dr. Maclean's edition of the poet. On the other hand, the sign of disapprobation (which M. Gerome of course intended to represent) was the extension of the thumb. This is set beyond doubt by Juvenal, iii. 36, 'Verso pollice vulgi quemlibet occidunt populariter.' Had your magazine been intended for general reading merely such a slip would not have been of much moment, but in the case of a publication of such authority as the BOY'S OWN PAPER it seems to me that the consequences may be serious." There is little doubt that our correspondent is right, though the point is one about which authorities have differed. Such modern works as Dr. W. Smith's "Dictionary of Antiquities" would explain Gerome's figures as expressing approbation; yet Prudentius writes:—

"Consurgit ad ictus
Et quoties victor ferrum jugulo inscrit, illa
Delicias putat esse suas, pectus jacentis
Virgo modesta jubet converso pollice rumpi."

Even the modest virgin rises excitedly at the blows, and as often as a gladiator plunges his sword into another's throat she feels a delightful sensation, and by the reversed thumb gives the signal for slaying the prostrate one. "Vertere pollicem" (to turn the thumb) was a familiar phrase expressing to condemn any one, and it is just the doubt as to the precise signification of this "reversed thumb" that has caused the confusion in this matter.

W. T. BLAKE.—1. See our "Boy's Own Museum" articles and Correspondence in the last volume. 2. Edward Jenner, the discoverer of vaccination, was a Gloucestershire doctor, born at Berkeley on May 17, 1749, and died there on January 26, 1823.

WHIP-POOR-WILL and T. S.—The *Autostromus vociferus*, or "Whip-poor-Will," is distributed over the eastern United States, and is replaced on the Missouri by the *A. Nuttallii*, which is smaller and lighter-coloured. It belongs to the Goatsucker or Nightjar family, and is seldom seen during the day. Its flight is low, swift, zigzag, noiseless, and protracted. It always sits with its body parallel to and never across the fence or bough which supports it. It comes from the south in the spring and returns in the autumn. The notes are clear and loud for an hour or two after sunset, and between daybreak and sunrise. The *Vireo barbatus*, or "Whip-Tom-Kelly," is an insectivorous bird, coming near the shrikes in the form of its bill and its habits. It is found farther south.

DURHAM VICTRESS.—Try Prout's Elastic Glue for your tricycle tyre, or the cement so frequently given in our columns.

F. CASTLE, T. F., and Others.—For all particulars regarding medical education get the students' number of one of the professional papers, say the "Lancet," published in the September of each year. We have frequently informed our readers that it is useless for them to enclose stamps for private replies, and that we can only answer a selection of their queries through these columns.



THE BOY'S OWN PAPER

Vol. IV.—No. 167.

SATURDAY, MARCH 25, 1882.

Price One Penny.
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WILD ADVENTURES ROUND THE POLE.

CHAPTER XXVI.—AN ADVENTURE ON THE PACK—SEPARATED FROM THE SHIP—DESPAIR—THE DREAM OF HOME—UNDER WAY ONCE MORE.

NOTHING in the shape of adventure came amiss to Rory. He was always ready for any kind of "fun," as he called every kind of excitement. Such a thing as fear I do not believe Rory ever felt, and, as for failing in anything he undertook, he never even dreamt of such a thing. He had often proposed escapades and wild adventures to his companions at which they



Dreaming of Home.

hung fire. Rory's line of argument was very simple and unsophisticated. It may be summed up in three sentences—first, "Sure we've only to try and we're bound to do it." If that did not convince Allan or Ralph, he brought up his first-class reserve, "Let us try, *anyhow*;" and if that failed, his second reserve, "It's bound to come right in the end." Had Rory been seized by a lion or tiger, and borne away to the bush, these very words would have risen to his lips to bring him solace; "It's bound to come right in the end."

The few days' delay that succeeded the accident to the Arrandoon, while she had to be listed over, and things were made as uncomfortable as they always are when a ship is lying on an uneven keel, threw Rory back upon his books for enjoyment. That and writing verses, and, fiddle in hand, composing music to his own words, enabled him to pass the day with some degree of comfort; but when Mr. Stevenson one morning, on giving his usual report at breakfast-time, happened to say,

"Ice rather more open to-day, sir; a slight breeze from the west, and about a foot of rise and fall among the bergs; two or three bears about a mile to leeward, and a few seals," then Rory jumped up.

"Will you go, Allan," he cried, "and bag a bear? Ralph hasn't done breakfast."

"Bide a wee, young gentleman," said McBain, smiling. "I really imagined I was master of the ship."

"I beg your pardon, Captain McBain," said Rory, at once; and with all becoming gravity he saluted, and continued, "Please, sir, may I go on shore?"

"Certainly not," was the reply; and the captain added, "No, boy, no. We value even Rory, for all the trouble he gives us, more than many bears."

Rory got hold of his fiddle, and his feelings found vent in music. But no sooner had McBain retired to his cabin than Rory threw down his much beloved instrument and jumped up.

"Bide a wee; I'll manage," he cried.

"Doctor," he added, disarranging all the medico's hair with his hand—Sandy's legs were under the mahogany, so he could not speedily retaliate—"Sandy, mon, I'll manage. It'll be a vera judeecious arrangement."

Then he was off, and presently back, all smiles and rejoicing.

"Come on, Allan, dear boy," he cried. "We're going, both of us, and Seth and one man, and we're going to carry a plank to help us across the ice. Finish your breakfast, baby Ralph. I wouldn't disturb myself for the world if I were you."

"I don't mean to," said Ralph, helping himself to more toast and marmalade.

"What are you grinning at now?" asked Rory of the surgeon.

"To think," said Sandy, laughing outright, "that our poor little boy Rory couldn't be trusted on the ice without Seth and a plank. Ha, ha, ha! my conscience!"

"Doctor," said Rory.

"Well?" said the doctor.

"Whustle," cried Rory, making a face.

"I'll whustle ye," said Sandy, springing up. But Rory was off.

On the wiry shoulders of Seth the plank was borne as easily as if it had been only an oar; the man carried the rope and sealing clubs. The plank did them good service, for whenever the space between two bergs was too wide for a safe leap it was laid down, and over they went. They thus made good progress.

There was a little motion among the ice, but nothing to signify. The pieces approached each other gradually until within a certain distance. Then was the time to leap, and at once, too, without fear and hesitation. If you did hesitate, and made up your mind to leap a moment after, you might fail to reach the next berg, and this meant a ducking at the very least. But a ducking of this kind is no joke, as the writer of these lines knows from experience. You strip off your clothes to wring out the superabundance of water, and by the time you put them on again your upper garments, at all events, are frozen harder than parchment. You have to construe the verb *salto** from beginning to end before you feel on good terms with yourself again. But falling into the sea between two bergs may not end with a mere ducking. A man may be sucked by the current under the ice, or he may instantly fall a prey to that great greedy monster, the Greenland shark. Well the brute loves to devour a half-dead seal, but a man is caviare to his maw. Again, if you are not speedily rescued, the bergs may come slowly together and grind you to pulp. But our heroes escaped scot-free. So did the bears which they had come to shoot.

"It is provoking!" said Rory. "Let us follow them a mile or so, at all events."

They did, and came in sight of one—an immensely great brute of a Bruin—who, after stopping about a minute to study them, set off again shambling over the bergs. Then he paused again, and then started off again; and this he did many times, but he never permitted them to get within shot.

All this time the signal of recall was floating at the masthead of the Arrandoon, but they never saw it. They began to notice at last, though, that the bergs were wider apart, so they wisely determined to give up the chase and return.

Return? Yes, it is only a little word—hardly a simpler one to be found in the whole English vocabulary, whether to speak or to spell; and yet it is a word that has baffled thousands. It is a word that we should never forget when entering upon any undertaking in which there is danger to either ourselves or others. It is a word great generals keep well in view; probably it was just that word "return" which prevented the great Napoleon from landing half a million of men on our shores with the view of conquering the country. The man of ambition was afraid he might find a difficulty in getting his Frenchmen back, and that Englishmen would not be over kind to them.

Rory and his party could see the flag of recall now, and they could see also the broad black fan being waved from the crow's-nest to expedite their movements. So they made all the haste in their power. There was no leaping now, the plank had to be laid across the chasms constantly. But at last they succeeded in getting just half way to the ship, when, to their horror, they discovered that all further advance was a sheer impossibility! A lane of open water effectually barred their progress. It was already a hundred yards wide at least, and it was broadening every minute. South and by west, as far as eye could reach, stretched this canal, and north-east as well. They were drifting away on a loose portion of the pack, leaving their ship behind them.

Their feelings were certainly not to be envied. They knew the whole extent of their danger, and dared not deprecate it. It was coming on to blow; already the face of that black lane of water was covered with angry little ripples. If the wind increased to a gale, the chances of regaining their vessel were small indeed; more likely they would be blown out to sea, as men have often been under similar circumstances, and so perish miserably on the berg on which they stood. To be sure, they were to leeward, and the Arrandoon was a steamer; there was some consolation in that, but it was damped, on the other hand, by the recollection that, though a steamer, she was a partially disabled one. It would take hours before she could readjust her ballast and temporarily make good her leak, and hours longer ere she could force and forge her way to the lane of water, through the mile of heavy bergs that intervened. Meanwhile, what might not happen?

Both Rory and Allan were by this time good ice-men, and had there been but a piece of ice big enough to bear their weight, and nothing more, they could have embarked thereon and ferried themselves across, using as paddles the butt-ends of their rifles. But there was nothing of the sort; the bay ice had all been ground up; there was nothing save the great green-sided, snow-topped bergs. And so they could only wait and hope for the best.

"It'll all come right in the end," said Rory.

He said this many times, but as the weary hours went by, and the lane widened and widened, till, from being a lane, it looked a lake, the little sentence that had always brought him comfort before seemed trite to even Rory himself.

The increasing motion of the berg on which they stood did not serve to reassure them, and the cold they had, from their forced inactivity, to endure, would have damped the boldest spirits. For a time they managed to keep warm by walking or running about the berg, but afterwards movement itself became painful, so that they had but little heart to take exercise.

The whole hull of the Arrandoon was hidden from their view behind the hummocky ice, and thus they could not tell what was going on on deck, but they could see no smoke arising from the funnel, and this but served further to dishearten them.

Even gazing at those lanes of water that so often open up in the very midst of a field of ice, is apt to stir up strange thoughts in one's mind, especially if one be, like Rory, of a somewhat poetical and romantic disposition. The very blackness of the water impresses you; its depth causes a feeling akin to awe; you know, as if by instinct, that it is deep—terribly, eeriesomely deep. It lies smiling in the sunshine as to surface, but all is the blackness of darkness below. Up here it is all day; down there, all night. The surface of the water seems to divide two worlds—a seen and an unseen, a known and an unknown and mysterious—life and death!

Tired at last of roaming like caged bears up and down the berg, one by one they seated themselves on the sunny side of a small hummock. They huddled together for warmth, but they did not care to talk much. Their very souls seemed heavy, their bodies felt numb and frozen, but their heads were hot, and they felt very drowsy, yet bit their lips and tongues lest they might fall into that strange slumber from which it is said men wake no more.

* *Salto*—I leap, or jump.

They talked not at all. The last words were spoken by Seth. Rory remembered them.

"I'm old," he was muttering; "my time's a kind o' up; but it do seem hard on these youngers. Guess I'd give the best puma's skin ever I killed, just to see Rory safe. Guess I'd—"

Rory's eyes were closed, he heard no more. He was dreaming. Dreaming of what? you ask me. I answer, in the words of Lover,

"Ask of the sailor youth, when far
His light barque bounds o'er ocean's foam,
What charms him most when evening star
Smiles o'er the wave? To dream of home."

Yes, Rory was dreaming of home. All the home he knew, poor lad! He was in the Castle of Arrandoon. Seeing, but all unseen, he stood in the cosey tartan parlour where he had spent so many happy hours. A bright fire was burning in the grate, the curtains were drawn, in her easy-chair sat Allan's mother with her work on her lap, the great deerhound lay on the hearthrug asleep, and Helen Edith was bending over her harp. How boy Rory longed to rush forward and take her by the hand! But even in his partial sleep he knew this was but a dream, and he feared to move lest he might break the sweet spell. But languor, pain, and cold, all were forgotten while the vision lasted.

But list! a horn seems to sound beyond the castle moat. Rory, in his dream, wonders that Helen hears it not; then the boy starts to his feet on the snow. The vision has fled, and the sound of the horn resolves itself into the shout,

"Ahoy—oy—hoy! Ahoy! hoy!"

Every one is on his feet at the same time, though both Allan and Rory stagger and fall again. But behold, a boat comes dancing down the lane of water towards them, and a minute after they are all safe on board.

The labour of getting that boat over the ice had been tremendous. It had been a labour of love, however, and the men had worked cheerily and boldly, and never flinched a moment, until it was safely launched in the open water and our heroes were in it.

The Arrandoon, the men told them, had got up steam, and in a couple of hours at most she would reach the water. Meanwhile they, by the captain's orders, were to land on the other side, and make themselves as comfortable as possible until her arrival.

Rory and Allan were quite themselves again now, and so too was honest Seth.

"Though, blame me," said he, "if I didn't think this old trapper's time had come. Not that that'd matter a sight, but I did feel for you youngsters, blame me if I didn't," and he dashed his coat-sleeve rapidly across his face as he spoke.

And now a fire was built and coffee made, and Stevenson then opened the Norwegian chest—a wonderful contrivance, in which a dinner may be kept hot for four-and-twenty hours, and even partially cooked. Up arose the savoury steam of a glorious Irish stew.

"How mindful of the captain!" said Allan.

"It was Ralph that sent the dinner," said Stevenson, "and he sent with it his compliments to Rory."

"Bless his old heart," cried Rory. "I don't think I'll ever chaff him again about the gourmandising propensities of the Saxon race."

"And the doctor," continued the mate, "sent you some blankets, Mr. Rory. There they are, sir; and he told me to give you this note, if I found you alive."

The note was in the Scottish dialect, and ran as follows:

"*My conscience, Rory! Some folks pay dear for their whistle. But keep up your heart, ma wee laddie. It's a vera judeecious arrangement.*"

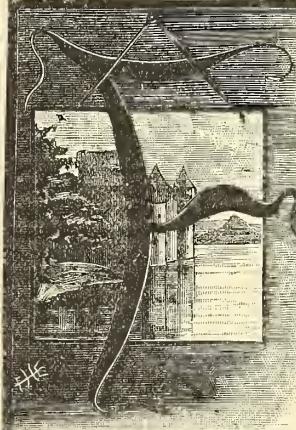
In a few days more the Arrandoon had made good her repairs, and, as the western wind had freshened, and was blowing what would have been a ten-knot breeze in the open sea, the steamer got up steam and the sailing-ship canvas, and together they took the loose ice, and made their way slowly to the eastward. The bergs, though some distance asunder, were still sufficiently near to considerably impede their way, and, for fear of accident, the Arrandoon took the cockle-shell, as she was always called now, in tow.

For many days the ships went steadily eastward, which proved to them how extensive the pack had been. Sometimes they came upon large tracts of open water, many miles in extent, and across this they sailed merrily and speedily enough, considering that neither of the vessels had as yet shipped her rudder. This they had determined not to do until they were well clear of the very heavy ice, or until the swell went down. So they were steered entirely by boats pulling ahead of them.

Open water at last, and the cockle-shell bids the big ships adieu, spreads her white sails to the breeze, and, swan-like, goes sailing away for the distant isle of Jan Mayen. Ay, and the big ships themselves must now very soon part company, the Scotia to bear up for the green shores of our native land, the Arrandoon for regions as yet unknown.

(To be continued.)

WITH THE CANADIAN FIRE-ENGINE.



IRE! Fire! "Ding-dong, ding-dong," goes the big town bell. Awake, all good citizens! The flickering glare that plays at the window of your bedroom windows is not that of the Northern Lights. I am a fast huddling on my uniform, and, having clapped my helmet upon my head, finish by buckling on my belt. A thundering knock at my door. "Up!" it is my captain's voice, for I am a member of the fire brigade.

The frost is keen upon the air as I step forth into the street, but the sky is clear as many English noonday skies.

The Aurora Borealis is there too, forming and re-forming, as though seeking the best pattern for a diadem, but its cracklings are lost in the tramp of feet and the cries of excited people.

In a minute I stand at my post in the Market Square, where my comrades are, some running in whilst I stand there breathless. Silently the

captain marshals his force, and, next moment, we move on towards the fire, pushing before us the ladder-waggon, all "on a jingle" with its multitude of little bells. Here comes our engine, Little Tommy, his swart flanks quivering with the jolting of the quick motion and his suppressed energy. My whiskers are white and crisp with ice formed by my congealed breath, my fingers benumbed by contact with the metal of the waggon; but it will be warm enough soon.

"Reel men, to your work!" shouts our captain through his trumpet. "Hose men, look alive there!" The engine is in play, pumping with arterial throbings that threaten, as often happens, to burst the tubing.

"Hook-and-ladder men to the front!" comes the order, and in a moment we who belong to that corps are swarming up the ladders, covering the roofs, or diving through the windows. Alack! frequently, in spite of the exertions of the brigade, the building is seen to be doomed, when comes the order,—"Chop away there—on with the irons!" and the structure comes down piecemeal beneath the vigorous tug of fifty pairs of arms. Fires spread so rapidly in Canada, and, indeed, all over America, that military discipline is found necessary. Measures have to be prompt and well planted, to prevent grave disaster.

Canadian houses were originally built of timber, and are yet constructed thus in many villages. These gave way before "frame" houses, lighter and yet more inflammable than the former. Deepening the perils which beset them, houses are also roofed with wood split into thin slabs, called "shingles," that become so dry in the fierce summer's sun as to ignite with the merest spark. Winter, with the need that it brings for a stove in each habitable room, has its own list of dangers, since both stove and stove-pipe are apt to grow red-hot. The stove-pipe should pass through a hole made in a fire-brick block built into the wall, but fire-brick is dear and must fit bearings. In the eager race of building, money is saved both by sparing material and lessening work; hence unsafe houses. It is easy, then, to understand that to be burnt down is the natural fate of the Canadian house built of wood or frame, and more especially is this so when streets are in question, the peril of one house being the peril of all.

Canadian town councils have now invariably a by-law which says that all new houses built within the town limits shall be of brick or stone, and there must be no lightly-constructed outbuildings. Chimneys, moreover, are to be properly made, subject to heavy penalties.

Our ambitious cousins, who have plenty of patriotism and no wish to hide the fact, boast that their country has produced the greatest fire of the age, referring to Chicago. It is true, yet Canada is well forward on the list for so young a country as she. Whether in Canada or the United States, no wonder that the fire-engine is a great institution.

Except in the cities, fire brigades are manned by volunteers, who receive their uniforms but no salary.

Far from being thought a low calling, it is an honourable mark of distinction to serve in the brigade, and, although with the growth of towns the care of public property passes into professional hands, smaller communities have men of position and culture enrolled as members.

The primitive state of society referred to is seen even more in the villages than in the towns, for there neither fire-engines nor fire brigades are kept—it is a question of handing buckets down a long line of men. Uniforms are not thought of; but the doctor leaves his patient, the lawyer his client, and the clergyman his pulpit, if it be Sunday, to hasten to the battle-field against the enemy of the community—fire.

Things being so, no wonder that those who engage, without pay, to repel the attacks of King Fire, should draw upon themselves the respectful interest of all reasoning people.

I was for many years a member of a Canadian fire brigade, and if, as a stranger in the country,

uninfluenced by personal motives of property, I was not wholly swayed by the high and generous ones assumed to be the case by grateful mayors when addressing the brigade at periodical banquets. It was pure love of adventure that kept me in the "Galt Fire Brigade."

Pulling down houses is, as has been said, quite as important a matter in Canada as putting out fires, but it must not be supposed that the engines are not kept up to the mark. Formerly, it is true, hand-engines were chiefly used, and to these modest yet serviceable machines are still restricted the remote towns; but it is the ambition of thriving communities to own a steam fire-engine. Even, however, when thus partially superseded, the hand-engine makes a valuable help.

Besides the man, or men, who work the engine, there is the main body of workers, all under the orders of a captain. This body is subdivided into "reel men," "hose men," "hook-and-ladder men," and the "salvage corps," each acknowledging its leader. The reel and hose men look after the tubing, quickly remedying any defect that may be discovered. They also carry the hose through passages and up ladders, until the seat of fire is reached. In cold weather this is very hard work; dangerous as well, for the hose becomes cased with ice, as also do the rungs of the ladders, while the weight of the distended tubing is considerable. Hose men have been known, however, to suffer their fingers to be frozen so badly as to require amputation, rather than relinquish their hold upon their charge. Not only fingers, but feet as well, are apt to freeze, standing for hours in the intense cold of the Canadian winter amidst the leakage of badly-joined pipes. The wall against which rest the ladders may give way and bury him beneath its ruins, or chimneys and roofing tumble down upon the hose man. Altogether, his duties are the most irksome of any, inducing feelings much like those of a non-combatant who has to come under fire during a battle.

The functions of the hook-and-ladder men are of a more active kind. Mounting to the roofs of the burning houses, they, making use of the axe hung from their girdles, speedily chop a hole large enough for entrance, sometimes, when expedient, unroofing a great portion of the building. It is very unsafe work in winter, the roofs being slippery. Theirs is the vanguard of attack, as when, forcing their ways into a house at any risk, they demolish any internal fittings that might impede the movements of the hose men. When, as often happens, it is found necessary, in order to hem in a fire, to destroy the building, these men attach to the prominent angles grappling-irons fastened to long ropes, and with "a long pull, a strong pull, and a pull all together," down comes the doomed structure. Over a building known to be well insured, and having no lives at stake, much fun is occasionally exchanged, as when, the rope breaking or the timbers suddenly yielding, fifty men—captain included—roll over in the snow. Still, this pastime is somewhat rough, and demands caution, for splinters have a habit of flying much farther than is desirable. Canadian houses being, for the most part, of such light construction, great energy has to be used to prevent the spread of fire, and the summary means of pulling down a block of houses to prevent worse, is very common. Hence, the hook-and-ladder men are in high esteem.

In a little town of ten thousand inhabitants, nearly every night during a past summer arose an alarm of fire, and some of the largest factories were reduced to ashes, only to be rebuilt on a grander scale and in a more substantial manner. No sooner does the big town-bell sound the alarm than, although it may be in the middle of the night, half the people spring from their beds and out into the streets, where the brightly-polished steam fire-engine is already to be seen bravely puffing as it is being hurried to the scene by four horses. Arrived there, or as near to the river or other source of water-supply as convenient, the engine is halted, the horses are taken from the shafts, and fuel is shovelled into the furnace until the engine fairly trembles with pent-in power. The hose men are at work; the

captain is shouting his orders through his trumpet; the hook-and-ladder men advance, pushing before them the "ladder-truck" all alive with bells; ladders are planted, and, in as short time as it has taken to write this, a firm and well-directed stream of water is playing upon the flames. As for the salvage men, of whom nothing has yet been said, they are always busy. Some of them may have been seen to enter the mass of smoke and sparks before the engine began to work, and here they come dragging articles of furniture of various kinds. The rule is to take whatever first comes to hand, unless specially instructed to the contrary, so that absurd instances have occurred where the gallant salvage corps bestowed all their energies upon the saving of old pails and castaway hat-boxes, while valuable goods were omitted.

Generally, however, everything is well managed, and the entire contents of burning buildings are laid neatly upon the road outside, where they are as safe as when they were in the owner's possession.

On one occasion one of the immense vats containing crude petroleum was found to be burning at an oil refinery. High in the airshot the flames, threatening the neighbouring buildings, and giving cause for the fear that an explosion might happen. The firemen were puzzled about what to do; they knew how to put out an ordinary fire, but this creature was all tongue and no body was an extraordinary one. At last somebody who knew something approached, gravely scratching his ear. He was a Yankee, thin and tall.

We had seen him step from the shadows, but his appearance and voice were so sepulchral that some of the bystanders were startled.

"I guess, stranger," said he, "yer off yer track, anyhow. You're not a-goin' tew dowsie that thar flame with water, air ye? Clap on the liver, my bwties!" At some risk this was done, and the fire put out.

Great credit was, once upon a time, due to a member of our brigade who, a large engine factory being in flames and the engine-room attacked, crept at extreme peril into the room, and, clambering upon the boiler, propped up the safety-valves, thus preventing an imminent explosion and rendering an approach possible to the rest of the firemen.

There was a dog attached to our brigade. What fire brigade has not its dog? Of course he was a great favourite with the men, and entered fully into the spirit of the thing, doing a little salvage work on his own account. When he happened once to break his leg, he was tenderly nursed by the engine-man, and seemed quite proud of the solicitude he received, just as though he knew his wound had been taken in a good cause. But, when the big bell rang out, and the engine was unlimbered and led out, his anguish knew no bounds; they had to lock him in his little hut, whence his muffled howls might be heard for a long time. What became of poor Tiger is not recorded; the writer left the town, and left his old and faithful four-footed friend.

Many readers have heard the bush fires spoken of, yet scarcely have realised that in the hot months of August and September these fires drive up with the wind against the very outskirts of the towns, and have to be fought systematically with aid of the fire brigades. One summer—that of 1877—the alarm rang forth every night for a week or more, to call the brigade to its duty. Travelling through any distance of country at this season, one is sure to meet either with traces of recent fire, or actual conflagration covering large tracts of country. When the peaty soil of forest regions burns, it burns for months, lasting until the heavy autumn rains extinguish it. How these fires occur is difficult to say. Carelessness in many cases, sparks from passing railway trains or steam thrashing-machines, and the spontaneous ignition of herbage caused by the sun's rays. The country is beautiful enough in spring and autumn, but during the hot weather there are none of the charming lawns met with in England; all is parched and yellow, and ready for the spark.

One of the duties of the fire brigade is to water the streets in dusty weather, although this does not apply to cities. But, whether or not, the brigades do frequent drill, rushing through the main streets with brightly-polished engine and other paraphernalia glistening in the sunlight, the tinkling of the bells scarcely out sounding the merry cries of the children who follow.



CHESS FOR BEGINNERS.

(Continued from vol. III., page 830.)

THE UNIVERSAL NOTATION.

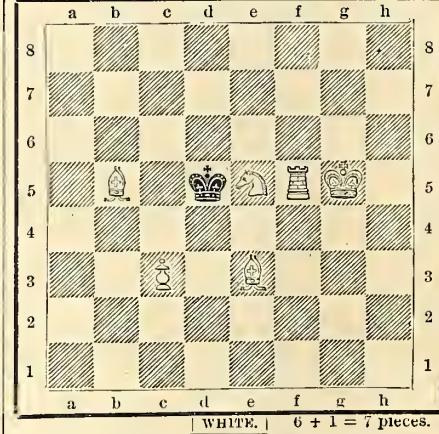


The *black* pieces, when written on a diagram, are distinguished by these six letters with a ring marked round each.

Problem No. 60.

By G. R. DOWNER.

[BLACK.]



White to play and mate in two (2) moves.

To Chess Correspondents.

H. M. (Forest Hill).—Your four-mover is sufficiently easy. It will appear in our next chess column.

M. P.—An attack on ten pieces, in one move, can be made by a *triple* or a *quadraple* discovery with the O, for if White pieces be placed thus: the L at a1, the Ms at a1 and d1, an O at d4, and Black pieces at d5, d6, e3, e7, f4, f6, g3, g7, h4, h6, then the O can move to f5; or the O can make the same move by a *quadraple* discovery, if the man at e3 be removed to b6, and a White N be added at g1.

W. H. L.—The K must not move into check, nor remain in check, whether the checking piece be pinned or not. Players who are in favour of allowing the K to remain in check from a piece which is pinned, and which therefore cannot capture the K, overlook two facts, viz.—(1) that the K is not taken, but is merely checkmated; (2) that some of the pieces would lose their freedom of action. Your opponent's move is shown in the following position: White—K d2; M d4, h5; P c3. Black—K d6; N a1, b3; O d5, f2; P a3, a5, c4. Black to move. You took the P with your N, checking whereupon your opponent took your N with his K, saying your O at d5 being imprisoned. If you had allowed his move, you might have given checkmate by playing your G from f2 to e1, for the M d4 would not be at liberty to take your O e4.

THE FIFTH FORM AT ST. DOMINIC'S:
A PUBLIC SCHOOL STORY.

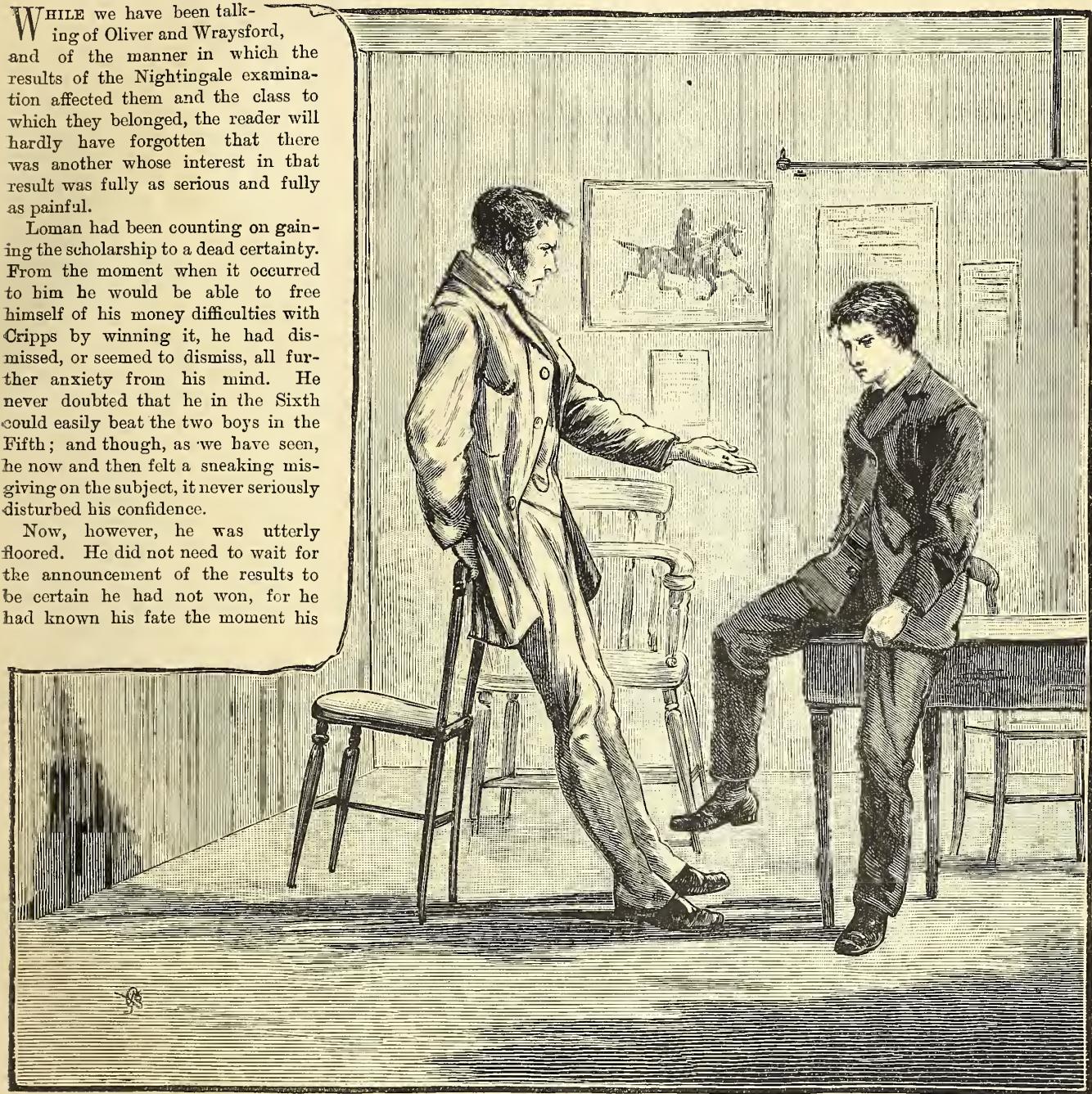
BY THE AUTHOR OF "THE ADVENTURES OF A THREE GUINEA WATCH," ETC.

CHAPTER XXV.—LOMAN IN LUCK.

WHILE we have been talking of Oliver and Wraysford, and of the manner in which the results of the Nightingale examination affected them and the class to which they belonged, the reader will hardly have forgotten that there was another whose interest in that result was fully as serious and fully as painful.

Loman had been counting on gaining the scholarship to a dead certainty. From the moment when it occurred to him he would be able to free himself of his money difficulties with Cripps by winning it, he had dismissed, or seemed to dismiss, all further anxiety from his mind. He never doubted that he in the Sixth could easily beat the two boys in the Fifth; and though, as we have seen, he now and then felt a sneaking misgiving on the subject, it never seriously disturbed his confidence.

Now, however, he was utterly floored. He did not need to wait for the announcement of the results to be certain he had not won, for he had known his fate the moment his



"I must have Ten Pounds down."

eyes glanced down the questions on the paper on the morning of examination.

At his last interview with Cripps that memorable Saturday afternoon, he had promised confidently to call at the Cockchafer next Thursday with the news of the result, as a further guarantee for the payment of the thirty pounds, never doubting what that result would be. How was he to face this interview now?

He could never tell Cripps straight out that he had been beaten in the examina-

tion; that would be the same thing as telling him to go at once to the Doctor or his father with the document which the boy had signed, and expose the whole affair. And it would be no use making a poor mouth to the landlord of the Cockchafer and begging to be forgiven the debt; Loman knew enough by this time to feel convinced of the folly of that. What was to be done?

"I shall have to humbug the fellow some way," said Loman to himself, as he

sat in his study the afternoon after the announcement of the result. And then followed an oath.

Loman had been going from bad to worse the last month. Ever since he had begun, during the holidays, regularly to frequent the Cockchafer and to discover that it was his interest to make himself agreeable to the man he disliked and feared, the boy's vicious instincts had developed strangely. Company which before would have offended him, he now

found—especially when it flattered him—congenial, and words and acts from which in former days he would have shrunk now came naturally.

"I shall have to humbug the fellow somehow," said he; "I only wish I knew how;" and then Loman set himself deliberately to invent a lie for Mr. Cripps.

A charming afternoon's occupation this for a boy of seventeen!

He sat and pondered for an hour or more, sometimes fancying he had hit upon the object of his search, and sometimes finding himself quite off the track. Had Cripps only known what care and diligence was being bestowed on him that afternoon he would assuredly have been highly flattered.

At length he seemed to come to a satisfactory decision, and, naturally exhausted by such severe mental exertion, Loman quitted his study and sought in the playground the fresh air and diversion he so much needed.

One of the first boys he met there was Simon.

"Hullo, Loman!" said that amiable genius, "would you have believed it?"

"Believed what?" said Loman.

"Oh! you know, I thought you knew, about the Nightingale, you know. I say, how jolly low you came out!"

"Look here! you'd better hold your row!" said Loman, surlily, "unless you want a hiding."

"Oh! it's not that, you know. What I meant was about Greenfield senior. Isn't that a go?"

"What about him? Why can't you talk like an ordinary person, and not like a howling jackass?"

"Why, you know," said Simon, off whom all such pretty side compliments as these were wont to roll like water off a duck's back—"why, you know about that paper?"

"What paper?" said Loman, impatiently.

"The one that was stolen out of the Doctor's study, you know. Isn't that a go? But we're going to hush it up. Honour bright!"

Loman's face at that moment was anything but encouraging. Somehow, this roundabout way of the poet's seemed particularly aggravating to him, for he turned quite pale with rage, and, seizing the unhappy bard by the throat, said, with an oath, "What do you mean, you miserable beast? What about the paper?"

"Oh!" said Simon, not at all put about by this rough handling—"why, don't you know? we know who took it, we do; but we're all going to—"

But at this point Simon's speech was interrupted, for the very good reason that Loman's grip on his throat became so very tight that the wretched poet nearly turned black in the face.

With another oath the Sixth Form boy exclaimed, "Who took it?"

"Why—don't you know?—oh, I say, mind my th...t!—haven't you heard?—why, Greenfield senior, you know!"

Loman let go his man suddenly and stared at him.

"Greenfield senior?" he exclaimed in amazement.

"Yes, would you have thought it? None of us would—we're all going to hush it up, you know, honour bright we are."

"Who told you he took it?"

"Why, you know, I saw him;" and here Simon giggled jubilantly, to mark what astonishment his disclosure was causing.

"You saw him take it?" asked Loman, astounded.

"Yes, that is, I saw him coming out of the Doctor's study with it!"

"You did?"

"Yes, that is of course he must have had it; and he says so himself."

"What, Greenfield says he took the paper?" exclaimed Loman, in utter astonishment.

"Yes—that is, he doesn't say he didn't, and all the fellows are going to cut him dead, but we mean to hush it up if we can."

"Hush yourself up; that's what you'd better do," said Loman, turning his back unceremoniously on his informant, and proceeding, full of this strange news, on his solitary walk. What was in his mind as he went along I cannot tell you. I fancy it was hardly sorrow at the thought that a schoolfellow could stoop to a mean, dishonest action, nor I think was it indignation on Wraysford's or his own account.

Indeed the few boys who passed Loman that afternoon were struck with the cheerfulness of his appearance. Considering he had been miserably beaten in the scholarship examination, this show of satisfaction was all the more remarkable.

"The fellow seems quite proud of himself," said Callonby to Wren as they passed him.

"He's the only fellow who is, if that's so," said Wren.

Loman stopped and spoke to them as they came up.

"Hullo! you fellows," said he, in as free and easy a manner as one fellow can assume to others who he knows dislike him, "I wanted to see you. Which way are you going; back to the school?"

"Wren and I are going a stroll together," said Callonby, coldly; "good-bye."

"Half a minute," said Loman. "I suppose you heard the results of the Nightingale read out?"

"Considering I was sitting on the same form with you when they were, I suppose I did," said Wren.

"That's all right," said Loman, evidently determined not to notice the snubbing bestowed on him. "Mine wasn't a very loud score, was it? Seventy! I was surprised it was as much!"

The two Sixth boys looked at him inquiringly.

"The fact is, I never tried to answer," said Loman, "and for a very good reason. I suppose you know."

"No, what?" asked they.

"Haven't you heard? I thought it was all over the school. You heard about the Doctor missing a paper."

"Yes—what about it? Was it found, or lost, or what?"

"No one owned to having taken it, that's certain."

"I should hope not. Not the sort of thing any fellow here would do."

"That's just what I should have thought," said Loman. "But the fact is some one did take it, you can guess who, and you don't suppose I was going to be fool enough to take any trouble over my answers when I knew one of the other fellows had had the paper in his pocket a day and a half before the exam." And here Loman laughed.

"Do you mean to say Greenfield stole it?" exclaimed both the friends at once, in utter astonishment.

"I mean to say you're not far wrong.

But you'd better ask some of the Fifth. It's all come out, I hear, there."

"And you knew of it before the exam?"

"I guessed it; or you may be sure I'd have taken a little more trouble over my answers. It wasn't much use as it was."

Loman had the satisfaction of seeing the two Sixth boys depart in amazement, and the still greater satisfaction of seeing them a little later in confidential conference with Simon, from whom he guessed pretty correctly they would be sure to get a full "all round" narrative of the whole affair.

"I'm all right with the Sixth, anyhow," muttered he to himself. "I only wish I was as right with that blackguard Cripps."

"That blackguard Cripps" had, next afternoon, the peculiar pleasure of welcoming his young friend and patron under the hospitable roof of the Cockchafer. As usual, he was as surprised as he was delighted at the honour done him, and could not imagine for the life of him to what he was indebted for so charming a condescension. In other words, he left Loman to open the business as best he could.

"I promised to come and tell you about the examination, didn't I?"

"Eh? Oh, yes, to be sure. That was last Saturday. Upon my word, I'd quite forgotten."

Of course Loman knew this was a lie; but he had to look pleasant and answer,

"Well, you see, my memory was better than yours."

"Right you are, young captain. And what about this here fifty-pound dicky-bird you've been after?"

"The Nightingale?" said Loman. "Oh, it's all right, of course, but the fact is I forgot when I promised you the money now, that of course they—"

"Oh, come now, none of your gammon," said Mr. Cripps, angrily; "a promise is a promise, and I expect young swells as makes them to keep them, mind that."

"Oh, of course I'll keep them, Cripps. What I was saying was that they don't pay you the money till the beginning of each year."

Loman omitted to mention, as he had omitted to mention all along, that young gentlemen who win scholarships do not, as a rule, have the money they win put into their hands to do as they like with. But this was a trifling slip of the memory, of course!

"I don't care when they pay you your money! All I know is I must have mine now, my young dandy. Next week the time's up."

"But, Cripps, how can I pay you unless I've got the money?"

"No, no; I've had enough of that, young gentleman. This time I'm a-going to have my way, or the governor shall know all about it,—you see!"

"Oh, don't say that!" said Loman. "Wait a little longer and it will be all right, it really will."

"Not a bit of it. That's what you said three months ago," said Cripps.

"I won't ask you again," pleaded the boy; "just this time, Cripps."

"Why, you ought to be ashamed of yourself, that you ought," exclaimed the virtuous landlord of the Cockchafer, "a keeping a honest man out of his money."

"Oh, but I'm certain to have it then—that is, next to certain."

"Oh! then what you're telling me about this here Nightingale of yours is a lie, is it?" said the 'eute Mr. Cripps. "You ain't got it at all, ain't you?"

Loman could have bitten his tongue off for making such a blunder.

"A lie? No; that is—Why, Cripps, the fact is—" he stammered, becoming suddenly very red.

"Well, drive on," said Cripps, enjoying the boy's confusion, and proud of his own sharpness.

"The fact is—I was going to tell you, Cripps, I was really; there's been something wrong about this exam. One of the fellows stole one of the papers, and so got the scholarship unfairly."

"And I can make a pretty good guess," said Mr. Cripps, with a grin, "which of the fellows that gentleman was."

"No, it wasn't me, Cripps, really," said Loman, pale and quite humble in the presence of his creditor; "it was one of the others—Greenfield in the Fifth; the fellow, you know, who struck you on Saturday."

"What, him?" exclaimed Cripps, astonished for once in a way. "That bloke? Why he looked a honest sort of chap, he did, though I do owe him one."

"Oh," said Loman, following up this temporary advantage, "he's a regular swindler, is Greenfield. He stole the paper, you know, and so won the scholarship, of course. I was certain of it, if it hadn't been for that. I mean to have a row made about it, and there's certain to be another exam., so that I'm sure of the money if you'll only wait."

"And how long do you want me to wait, I'd like to know?" said Cripps.

"Oh, till after Christmas, please, at any rate. It'll be all right then, I'll answer for that."

"You'll answer for a lot of things, it strikes me, young gentleman," said Cripps, "before you've done."

There were signs of relenting in this speech which the boy was quick to take advantage of.

"Do wait till then," he said, beseechingly.

Cripps pretended to meditate.

"I don't see how I can. I'm a poor man, got my rent to pay and all that. Look here, young gentleman, I must have £10 down, if I'm to wait."

"Ten pounds! I haven't as much in the world!" exclaimed Loman. "I can give you five pounds, though," he added. "I just got a note from home to-day."

"Five's no use," said Cripps, contemptuously, "wouldn't pay not the interest. You'll have to make it a tenner, young gentleman."

"Don't say that, Cripps, I'd gladly do it if I could; I'd pay you every farthing, and so I will if you only wait."

"That's just the way with you young swells. You get your own ways and leave other people to get theirs best way they can. Where's your five pound?"

Loman promptly produced this, and Cripps as promptly pocketed it, adding,

"Well, I suppose I'll have to give in. How long do you say, two months?"

"Three," said Loman. "Oh, thanks, Cripps. I really will pay up then."

"You'd better, because, mind you, if you don't I shall walk straight to the governor. Don't make any mistake about that."

"Oh yes, so you may," said the wretched Loman, willing to promise anything in his eagerness.

Finally it was settled. Cripps was to wait three months longer; and Loman, although knowing perfectly well that there was absolutely less chance then of having the money than there had been now, felt a

weight temporarily taken off his mind, and was all gratitude.

Of course he stayed awhile as usual and tasted Mr. Cripps's beer, and of course he met again not a few of his new friends—sharpers most of them of Cripps's own stamp, or green young gentlemen of the town, like Loman himself. From one of the latter Loman had the extraordinary "good luck" that afternoon to win three pounds over a wager, a sum which he at once handed over to Cripps in the most virtuous way, in further liquidation of his debt.

Indeed, as he left the place, and wandered slowly back to St. Dominic's, he felt quite encouraged.

"There's eight pounds of it paid right off," said he to himself; "and before Christmas something is certain to turn up. Besides, I'm sure to get some more money from home between now and then. Oh, it'll be all right!"

So saying he tried to dismiss the matter from his mind and think of pleasanter subjects, such for instance as Oliver's crime, and his own clever use of it to delude the Sixth.

Things altogether were looking up with Loman. Cheating, lying, and gambling looked as if they would pay after all!

(To be continued.)

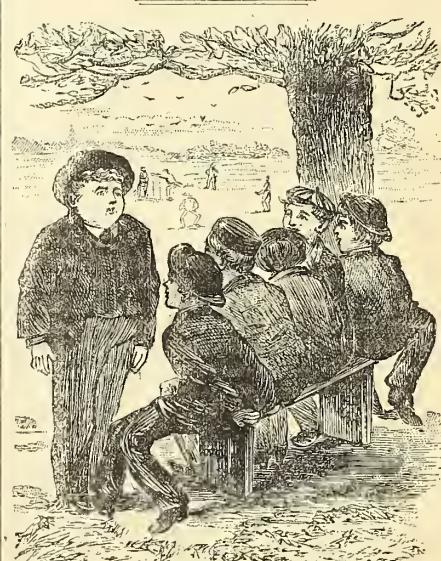
THE BESTS ON RECORD.

TWENTY-FIVE MILES RUNNING.

ANOTHER best on record to chronicle, and on another Boxing Day, and not one which has surpassed its fellows by some mere fraction of a second, some "ghost of an interval," but one with a good substantial gain of a quarter of an hour in a two and a half hours' run, or, to speak financially, of some ten per cent! The ground was Stamford Bridge; the race, a scratch one, under the auspices of the London Athletic Club; the day, the Monday after Christmas; the time, one o'clock in the afternoon. Prizes were offered for the first half-dozen men in, there were twenty-one entries, and the starters were:—H. W. Crosse, L.A.C.; F. J. Cullen, Lea Harriers; J. E. Dixon, Spartan Harriers; G. A. Dunning, Clapton Beagles; F. W. Farningham, L.A.C.; T. M. Gale, Blackheath Harriers; S. Golder, Blackheath Harriers; W. Haden, Temple B.C.; W. Lock, Spartan Harriers; J. C. Milligan, Blackheath Harriers; F. Sabin, Holte Harriers; W. Simmons, Holte Harriers, Birmingham; W. H. Tucker, Spartan Harriers; C. F. Turner, Spartan Harriers; H. E. Watson, Blackheath Harriers; and F. Wynne, Ranelagh Harriers. They were got off in the usual capital style by Mr. W. Waddell. Dunning at once rushed to the front, and the race was his from the very commencement. He held the lead throughout; he lapped Dixon at eleven and three-quarter miles, amid the applause of the few spectators gathered round the half-frozen path; at fifteen miles he was nearly nine hundred yards before his field; in two hours he ran the greatest distance ever covered by an amateur in the time—twenty miles one hundred and ninety yards; from eleven to twenty miles he beat his own previous bests made in the Clapton Beagles' races in January last year; he ran twenty-one miles in 2h. 6min. 10sec., twenty-two in 2h. 12min. 48sec., twenty-three in 2h. 19min. 50sec., and running his last quarter-mile in 1min. 23sec., passed the winning-post in the full time of 2h. 33min. 44sec., more than twenty minutes in front of the second man, beating the best amateur times from the twenty-first mile, those of P. H. Stenning at Stamford Bridge in April, 1879, eclipsing that gentleman's record for the twenty-fifth mile by no less than 14min. 58sec., and improving on the best professional time, that of G. Mason at Lillie Bridge last March, by 2m. 50sec., the only instance we have at running of an amateur

lowering professional colours. His immediate followers were Tucker, second; Dixon, third; Simmons, fourth; Cullen, fifth; and Turner, sixth.

Such a performance is of unusual merit, but its excellence is hardly as great as at first appears, and we are afraid that Mr. Dunning, who, by-the-by, now holds the amateur running records from eleven up to twenty-five miles, will, before long, have to make fresh efforts or else yield his place. The fact is, that at short distances our men have been practising for years, and although the limit has not been reached, and probably never will be reached while practice and training for such contests are indulged in as persistently as they have been during the last generation, yet we have, to a certain extent, discovered what a man is capable of, and the amount of advance of necessity becomes each time smaller and smaller. When, however, we come to branches of athletics to which little attention has hitherto been paid, a much greater scope for improvement is offered, and the records at such distances suffer curtailment by leaps and bounds. Of late greater attention has been given to feats of endurance, and, in consequence, the old limit-marks are fast being left behind in the cold. Walking records have been vanishing at a brisk rate during the last few months, and now the running chronicles are to take their turn. The times we accomplish, and the distances we travel, would astonish our grandfathers, although they were by no means so behindhand in such matters as some of our modern patrons of the pentathlum would have us believe. Speed and endurance they had in almost as fair a share as their descendants, but they were not shown under the same conditions. It is a good many years ago now, for instance, since Captain Horatio Ross, the famous deerstalker and rifle-shot, was roused out of his after-dinner nap by Sir Andrew Hay, at Black Hall, Kincardineshire, with the pleasant information of, "I say, old fellow! I want you to go as my umpire with Lord Kennedy to Inverness. He has to get there on foot before I can!" And notwithstanding that the party had been out all day snipe-shooting, wading about for some seven or eight hours among the bulrushes, they there and then started off in their evening costume—thin shoes to begin with, Wellington boots (tight ones, sent on by mistake) to continue with, and no boots at all to end with—straight from Banchory, right across the Grampians all night, next day, and next night, ninety odd miles, over the mountains, through torrential rain, reaching Inverness at 6 a.m., and, after a few hours' rest, going out early the next morning, and coming home to dinner at night, just a little tired, and with heavy bags of game!



"I say, you fellows! Can't you make room for a little one?"

THE ILL-USED BOY; OR, LAWRENCE HARTLEY'S GRIEVANCES.

By MRS. ELOART, AUTHOR OF "JACK AND JOHN," ETC., ETC.

CHAPTER XXX.—A NEW SITUATION FOR LAWRENCE.



EARLY in the morning he was awoken by the buzz and chatter of children's voices. Hedges are rarely to be seen in Germany, and the field where he had slept was, like many others, open to the road, with fruit-trees growing along its margin and dotting its surface here and there, so that from the tree which had sheltered him he could see the boys and girls of various ages, some with bare feet and some well shod, but most of them with satchels and clean smiling faces, hurrying on in the early morning to school. It was a pretty sight enough, though they were mostly peasants' children. And as he sat and ate his breakfast—only a crust of bread, saved from his supper of the night before, and another apple—he saw the carts, drawn by the kindly, peaceful-looking cows, plodding slowly along; men going to and fro to their work, and some few women, who were later than the others, taking their baskets of fruit and butter to market. It was such a strange new world in which he found himself, and a very strange new experience to feel himself unwashed, and with no means of washing—dressed, too, in the same garments in which he had passed the night.

He felt ashamed of going into the town and asking at the post-office if there was any letter for him; everybody would see how dirty and disgraceful he looked. Well, if the letter came, and there was money inside—oh! his mother would be sure to send him that—he would go and have a bath before he started on his journey. He crept into the town and found his way to the post-office, where, as before, there was nothing for him. The truth was, his mother had left Coblenz before his letter reached there, and as she had no expectation of letters following her on after the first two or three days of her departure from Heidelberg, she had given no directions about any following her from Coblenz.

Then he sat down by the roadside, perfectly benumbed with misery—when I say by the roadside, I mean in a comfortable seat such as we place in our parks—under the trees which grow along one side of the road leading past a number of good houses, and up to the hill on which Heidelberg Castle is situated. What should he do?—what could he do? Would anybody give him any work? and what work was he fit for? People passed him speaking English; they must be his own country people. Would they help him if he asked them? How should he bring his mind to do it? No; he felt as if it would be easier to die first.

At last he felt that he must eat, if it was only the fallen fruit by the wayside, and over the bridge that leads out of the lower part of the town into the open country he went. But there was little fruit to be had for the picking up. Then he felt in his

pocket and found—all there was to find—two English pennies. He would walk to the nearest village and buy some bread with this. He felt so ashamed of going back to the town, every one seemed looking at him there. So he rose, and presently came up to a large cart laden with goods—a bed, chair, tables—evidently the furniture of homely working people. The cart was drawn by two cows, with those broad, benevolent faces that all cows seem to have in Germany—at least, those employed as beasts of burden. A stout peasant woman walked by the side of the cart, and three children, each but a small one, were seated on the bedding towards the end of the cart. There was a large basket in front, out of which he saw the end of a long loaf protruding, and he wondered if the woman would give him a better twopennyworth of bread than they would at the shops.

Just then the children in the cart began to quarrel. The boy struck the girl, and then the girl struck back. And the baby, of whom it was impossible to tell whether it was boy or girl, came to trouble in the scuffle, for it rolled over and fell out of the cart and on to the road. The mother, with a scream, rushed towards it, but she would not have been in time to have saved it from the wheel had not Lawrence been



there. He caught it up by its clothes and held it awkwardly enough. It was a stout little German, about a twelvemonth old, and it roared very lustily, and roared louder when the mother took it, and she scolded the other children and kissed this one, and then turned to thank Lawrence.

He understood her well enough to know that she was grateful, and he felt pleased, himself, that he had saved the child, though it was of the class that in England he would have called a "brat." He pulled out his money with a little more confidence and pointed to the bread. The woman looked at him a little curiously. He was a gentleman's son, to judge by his clothes, though travelling and sleeping in the fields had

not improved them; but he had a pinched, starved look, which perhaps fretting and anxiety had given him as much as the short commons he had had for the last day or two. Perhaps he had run away from school, the good woman thought; but he certainly had behaved well to her little Wilhelmina, and she would behave well to him—do him a good turn and herself one at the same time, if he would allow her. So she cut him off a great piece of bread, pointing out to him with some emphasis that it was good white wheaten bread, and not the black rye that the peasants and soldiers eat. She also gave him a slice of sausage, and refused his money.

Lawrence felt much obliged to her, and thought it was not a bad thing for him that Miss Wilhelmina had fallen out of the cart. The urchin was clinging to her mother now, but made signs that she would like to go to Lawrence. She seemed a grateful infant. Then the mother intimated to Lawrence that if he would go on with her to the end of the journey—three miles more—and assist in carrying Wilhelmina, whom she did not like to put back in the cart with Albrecht and Paulina, and could not well carry all the way herself, as she was heavy, and she had the cows to look after, she would give him a good supper when "her man" and she had unpacked their goods—"her man" was at the new house—and, if he wanted it, a bed with Albrecht.

Lawrence did not understand all this speech, but he did understand that it was meant kindly, that it promised supper and bed; and it was something to make friends even with working people like these. He ate his bread and sausage, and then he found Wilhelmina placed in his arms, and looking very pleased with her situation, ramming her fat little fist sometimes in Lawrence's eyes and sometimes in her own, and occasionally varying the performance by sucking her thumb.



On they plodded along the broad, dusty, sunny highway. Lawrence felt very dejected. What a position to have brought himself into! And nobody to thank but himself. Nurse to a fat German baby, and indebted to a German peasant woman for the bread he had just eaten and the supper he was to have. He hung his head in very shame and helplessness, and walked so slowly that Wilhelmina's mother told him he must keep pace with the cows. Then he stepped a little faster, and again fell back, he was so tired and worn out. And then he heard voices—clear, glad, boyish voices—strangely familiar, and, looking up, saw in the road just before him, staring as if they could not realise that it was he—Ted Pratt and his Cousin Robert.

(To be continued.)

WINTER'S

FAREWELL to weary winter time !
The budding hedges show 'tis spring,
And back from many a distant clime
The homesick birds are on the wing.

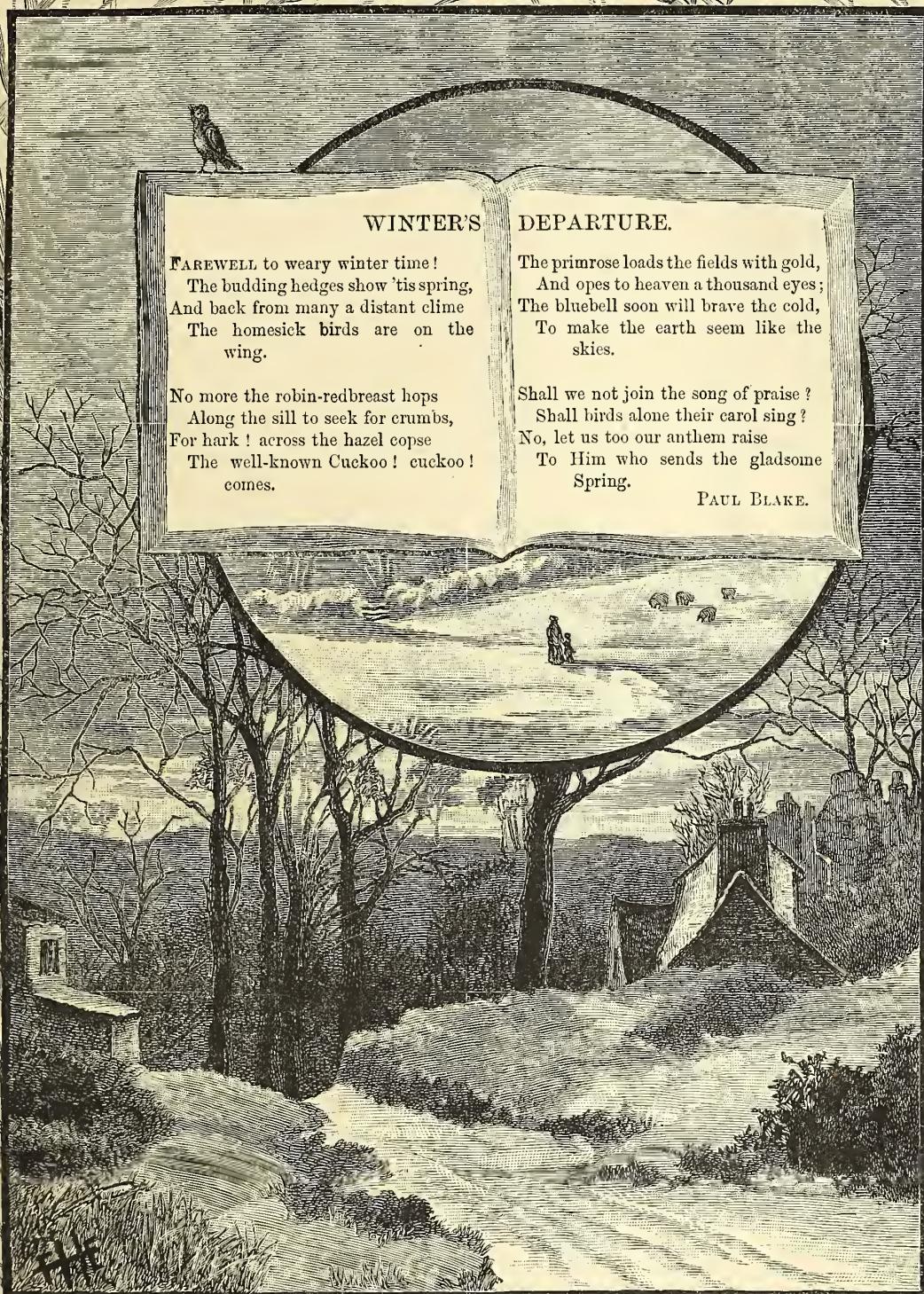
No more the robin-redbreast hops
Along the sill to seek for crumbs,
For hark ! across the hazel copse
The well-known Cuckoo ! cuckoo ! comes.

DEPARTURE.

The primrose loads the fields with gold,
And opes to heaven a thousand eyes ;
The bluebell soon will brave the cold,
To make the earth seem like the skies.

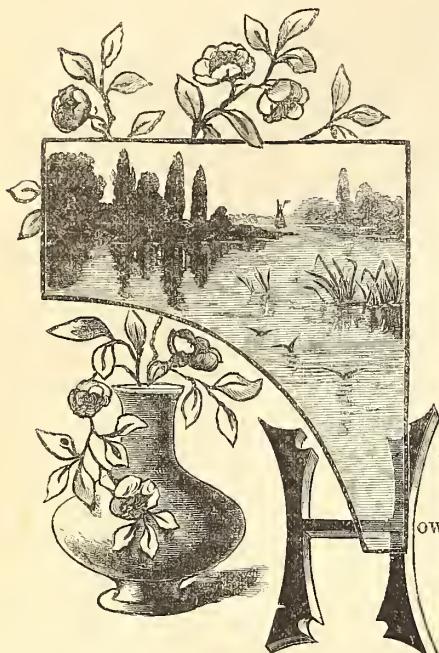
Shall we not join the song of praise ?
Shall birds alone their carol sing ?
No, let us too our anthem raise
To Him who sends the gladsome Spring.

PAUL BLAKE.



FISHING STATIONS NEAR LONDON.

BY J. HARRINGTON KEENE,

Author of "The Practical Fisherman," etc.

quickly the fishing season seems to have come round again! It has been suggested to me by our Editor, that to many of the readers of my papers on "Fishing-Tackle," in the last volume, a short and pithy article, pointing out whereabouts near London one can fish with reasonable hope of sport, would be acceptable. Boys as a rule cannot afford long and expensive journeys out of their limited pocket-money, and therefore I shall in no case refer to distances for which the railway fare is more than half-a-crown or so, nor shall I write about any spot I have not visited myself, and fished.

I shall commence with the fishing stations of dear old Father Thames, from whose stream I have taken some tons—I think I may truthfully say *tons*—of fish of all kinds, and from whom I am almost always able to provide myself with a fair bag at the close of most days whereon I fish, be it winter or summer, or blow it east, or north, or west, or south. This seems a daring thing to say, but I venture to predict that if every boy who goes in for anything does so following the Scriptural exhortation, "Whatever thy hand findeth to do, do it with all thy might," he will be able truthfully to say the same, after possibly many less years' experience than has fallen to my lot.

At one time the Thames was fishable right down to London Bridge, shad and flounder and various other fish being very numerously taken; but of late years this has not been the case, owing to the impurity of the water and the increased traffic. I have seen dace of splendid size taken from close to Westminster Pier, it is true—indeed, Mr. Gee, of St. Andrews Street, St. Martin's Lane, who is, by-the-by, a very good tackle-maker for boys, tells me that he gets the chief of his dace for jackbaits from the water along the embankment. However, these are only taken in very early morning, before the steamboats are plying, and then of course only with a net. It therefore is certain that the Thames near London is not available for boys. This being so, I advise that we make Richmond Ferry the starting-place on the Thames.

Fishing at Richmond.—Richmond is 10 miles from Waterloo Station, and the return third-class fare is 1s. 3d. On getting out at the station make your way across Richmond Green, and so on to the water by a road which leads out near the railway bridge. Turn to the right and walk down some half-a-mile, and if the tide is just ebbing you will find that all along the

shore up to the railway bridge some capital dace, with an occasional roach, barbel, chub, perch, and even small eels, can be met with. Fish with light tackle, small hook, and gentle or paste bait, and throw in now and then little balls of ground bait wherever you "pitch," as it is termed, composed of bran or raspings and stale bread, kneaded up into a sort of paste. All along, up to Richmond Bridge, there is occasionally some capital dace fishing, and they run from the size of a sprat to that of a herring.

Still continuing up the same side of the water, the angler will find fish right away by Twickenham, till he gets to Teddington Lock, but as a day will be consumed in properly fishing Richmond, I will begin another paragraph with Teddington.

Fishing at Teddington.—Teddington is 13 $\frac{3}{4}$ miles from Waterloo, and the fare, return third class, is 1s. 8d., and when I tell my readers that a friend of mine not very long ago took a trout there of 10 $\frac{1}{2}$ lb. at the weir, and that I *know* there are many more there, as well as heaps upon heaps of barbel, chub, dace, perch, etc., he will perceive I am going to extol this angling station. Boys can use any tackle they like, but they ought not to venture near the weir unless they can swim well, or are accompanied by a grown-up experienced person, as weirs on the Thames are dangerous, as, indeed, they are on any river. All up the bank there is a fair chance of good fish, especially very early in the morning and late at night. If it be possible for my readers to fish at these times it is advisable to do so, because the great summer traffic interferes with fishing very much in the day. It is not advisable to go farther than the very large tree which will be seen near the towpath, about a mile from Teddington. If a boat is used there is capital fishing on the other side of the river, all above Teddington, chiefly for large carp—a great many of these have been taken—barbel, chub, and perch. It requires an experienced boatman to effect good results, and there are several fishermen in the locality. Their charge for a day in a punt is, however, 7s. 6d. and their food, which is rather above the average young angler.

Fishing at Kingston.—Kingston is best reached, I think, from Hampton Wick, for the part above the bridge and up to Messenger's boat-house at Surbiton; but Kingston Station is the best to book to for the bank leading to and past the railway bridge. There is good all-round fishing here, especially at the railway, where a drain discharges itself into the river, or did so last year. I got some splendid roach, and, strangely enough, I caught a jack there, weighing nine pounds, under the following extraordinary circumstances. I was fishing with light roach tackle—a bamboo rod, fine silk running line, small hook, and gentles for bait.

After taking some two dozen fish, roach and dace of nice size, I suddenly found that the fish left off biting. Guessing the cause, namely, that some fish of prey was frightening the lesser brethren of the stream, I amused myself endeavouring to hook a large minnow from a shoal very close in at the bankside. All at once there was a commotion, and quite a herd of small roach and dace rushed in towards the bank, and, in fact, in all directions. Whilst I was watching this, and waiting for his ravenous pikeship to reappear again, I found my line was going out fast and furiously from the reel, and judge my astonishment when I found I was fast into a very large pike. Fortunately the line was long, though very fine and fragile, and though I could hardly hope to check the career of so large a fish, I determined to let him have as much play as he chose, until signs of exhaustion presented themselves. After much careful playing of this fish I managed to get him into the landing-net. My surprise knew no bounds at what I saw. There lay a nine-pound pike, with handsome mottled sides

gleaming in the sun, my tiny hook fast in the side of his jaw, and on my line, having slipped up the gut, the crushed and mutilated remains of a little roach. The latter must have taken the gentle, and whilst struggling to get loose have rendered itself attractive to the pike; the pike then took it, and found the bitter bit. Hampton and Hampton Court are both within a mile or two of Kingston, and in each case afford good sport of the character referred to. Kingston is 12 miles from Waterloo, and the return ticket, third class, is 1s. 8d. Hampton is 14 $\frac{1}{2}$ miles, fare, return third, 2s. Hampton Court is 14 miles, and the fare, return, 1s. 6d.

Moulsey and Moulsey Hurst present great attractions to the bank and boat fisher. The barbel, perch, club roach, dace, and gudgeon, with the agreeable variation of a possible trout, afford good sport when the weather is fine but not too hot. Especially is there a likelihood of a heavy bag just after a not too heavy thunder-storm has cleared the atmosphere and brought down an abundance of insects, foodworms, etc. At such times a well-scoured lobworm does great execution, and I can assure my readers that I have frequently had some splendid sport between Moulsey and Sunbury, which is the next fishing station to which I will refer.

Sunbury is 16 $\frac{1}{2}$ miles from Waterloo, and the fare, return third class, 2s. 3d. A more delightful part of the river than this can hardly be imagined, both as regards scenery and fishing prospects. Bream and barbel abound here at the weir, and it is quite easy to fish from the bank with a lobworm, large hook, and leger. There are also some splendid trout hereabouts, and a season rarely passes without a specimen of this species being taken. Now as it is by no means improbable that some of my pupils in angling may encounter one of these magnificent fellows in his wanderings after fish, I will give one or two brief directions for its capture. The bait for a Thames trout is a small fish, and it is usually used with a spinning float (see "Tackle and Tackle-making," vol. iii.). Its haunts are usually in the eddies near to a swift-running stream, such as the weir torrent, and when it is hooked then comes the tug of war. You must be exceedingly careful not to pit your tackle's strength against the strength of the fish until he is quite exhausted in his efforts to break free; then lead him gently down stream to some shallow part, and either then strand him, or better still, lift him in the landing-net, being careful that you get his tail in first, or it is possible that the hooks may catch in the net and so enable the trout to break loose. In bream-fishing it is necessary to throw in a few worms from time to time.

(To be continued.)



THE TWO CABIN-BOYS:

A STORY OF ADVENTURE BY LAND AND SEA.

BY LOUIS ROUSSELET.

CHAPTER XXIII.—THE EXPIATION.

At early dawn they descended the shaft with their tools and set to work. The quartz block resisted all their efforts, and at the end of the day they had only reduced its thickness by a few inches.

"It is impossible for us to go on like this," said Penguin, "our tools get blunted on this rock. It is harder than steel. We must use some gunpowder and blow it up."

"That is right," said the sailor; "I have thought of that, and we have no lack of powder, for I brought some in case we should meet with something of this sort; but we must use it with care, for we risk blowing up the gallery, and then we should have to do everything over again."

They tried then to use powder, and succeeded in blasting off the greater part of the quartz block.

This dangerous operation occupied three days, but on the fourth, having removed the obstacle, they found the rock rubbly and broken, and the pickaxes brought it down very rapidly. Here a fresh difficulty presented itself, for the sides of the gallery cut in the softer soil threatened to fall in, and they had to stay them with a few planks they picked up, and some tree trunks which they had to cut down. In addition to this the water began at one spot to flow in rather freely, and it looked as though the mine might be flooded.

A division of labour was the result, and whilst two worked in the gallery, the third remained in the shaft, and by means of a bucket attached to a rope bailed out the water which accumulated at the bottom of the mine. In the morning, before commencing work, they were all three obliged to set to at this unpleasant task, for during the night the water had risen a couple of feet in the shaft.

And yet, as the reward of all this labour—and they had worked for a fortnight—they had not seen a single spangle of gold.

Dominique grumbled.

"Perhaps," he said, "Bastien Moreau only left the mine when he was sure that nothing more remained in it."

"Perhaps so," answered Penguin, phlegmatically. "But in that case we can do nothing, can we? You can see that for yourself."

Daniel was the most ardent and persevering. He would not be disappointed, and he worked away without ceasing, even when his companions took a short rest during the day.

One morning he had gone down into the mine without waiting to get out the water which had accumulated during the night, and had plunged knee-deep into the thick mud and furiously attacked the rock. The fragments rolled down at his feet and splashed him with dirty water, but he did not even pause.

Suddenly his arm stopped. He became pale and thought he was going to faint. The light of the lamp falling on the side he was working at showed him a small yellow resplendent mass shining embedded in a piece of quartz. With trembling hand the lad took up the lamp and held it to the brilliant spot.

It was, in truth, GOLD, and Daniel,

motionless, contemplated the fascinating metal.

"Gold!" he murmured in a stifled voice. Then, tearing down with a vigorous effort the nugget in the small bit of quartz that surrounded it, he rushed like a madman out of the gallery.

"Martial! Dominique!" he cried; and, holding up to them the precious fragment, "Gold! Gold!"

On hearing the magic words the sailor slid down the ladder in the shaft and was soon followed by Penguin.

The stroke of Daniel's pickaxe had broken the charm. The vein of gold, the treasure of Bastien Moreau, was recovered; and that evening, when the adventurers, almost overcome with fatigue and excitement, regained their tent, they carried back from the mine four large and a number of small nuggets weighing some fifty pounds in all, and representing quite a fortune for each of them.

For two days the gold-diggers continued to get from the quartz vein so large a quantity of nuggets that Dominique was seriously troubled as to how they should carry away so great a weight.

"How unfortunate," said he, "that we have not got a third mule. Even if we abandon the tools the two beasts will hardly be able to carry the gold we have already got, and we must take some food for our journey across the desert."

"It is a pity," replied the Canadian; "but there is nothing to prevent our doing as Bastien Moreau did. We can conceal the entrance to the mine before the start, and we can come back later on after we have placed our gold in safety at the Melbourne Bank."

Daniel was quite dazzled by the sudden riches, and regretted a little that they were not to be his.

"If it had not been for Martial," he said to himself, "I would have shared all this gold with Dominique. How the eyes of the Castell people would have opened when I got back with my treasure! In the first place I should have made my old father leave his cottage, and we would have gone away to live in a large country house near some big city, perhaps Perpignan. But Martial is right—the treasure does not belong to me. After all, had Moreau not confided to me his pocket-book I should never have managed to discover this wonderful shaft, even if the idea had struck me of trying my luck in Australia. How rich Madame Moreau is going to be! But suppose we try all we can and still fail to find her, would not the treasure belong to us then?"

In short, the sight of the gold began to produce its baleful effects on Daniel's restless mind. The lad, so recently proud of his good resolutions due to Penguin's inspiration, found himself assailed by evil thoughts. It must be admitted he struggled against them bravely, and the Canadian never suspected the struggle which poor Daniel had to sustain against the constant temptation.

Dominique hid neither his feverish joy nor his eager covetousness. In the evening, after the day's work was done, he sat in the tent before the box in which the

nuggets were heaped up. He amused himself by plunging his hands to the bottom of the glittering lumps, and his eyes shone as if illuminated by the reflection of the dazzling metal as he muttered over and over again,

"If all this gold were mine!"

On the tenth day the workers found but a few small nuggets, and then on the following day the traces of the metal gradually and entirely disappeared. For a whole week they continued at work, but they did not come across another spangle of gold.

"It is evident," said Penguin, "that we have reached the end of the vein. The quartz itself has given out, and we shall get no more gold here."

"Well, let us try on one of the sides of the galleries," said the insatiable Dominique.

"We had better go back to Melbourne," said Penguin, "particularly as our provisions are nearly exhausted. Have we not gold enough? I reckoned yesterday we had nearly five hundredweight, or more than forty thousand pounds' worth."

"That comes to only thirteen thousand pounds for myself," said the sailor, bitterly.

"That is all," said Daniel, ironically. "I am sorry for you, and I really do not see why you should not claim damages and interest from us."

"Do not be funny," said Dominique. "What I have got is not enough for me—that is all. We will go away from here only when I choose."

"You are not our master," interposed Penguin, warmly. "We will go away whenever it suits us."

"Look here," said Daniel, "do not let us quarrel without a cause. We will try and cut another gallery. If we do not find gold in another week we will abandon the mine and make for Melbourne. Is that agreed?"

"Be it so," growled Dominique.

The miners then began a gallery, striking off at right angles from the end of the one where they had found the rich deposit. They were often obliged to suspend their labours in consequence of their meeting with springs, the flow from which they had to stop to prevent the mine being flooded. The water notwithstanding came in much more copiously than before, and Dominique had to remain all day outside the shaft keeping it clear with his bucket.

The week was coming to an end, and not the smallest fragment of gold had been discovered. Penguin on several occasions had spoken of giving up the game, but the sailor wished to keep on till the day they had fixed.

After four hours' hard work Daniel exclaimed,

"Upon my word I have had enough of it. We are not convicts that Dominique should make us wear ourselves out like this without any return."

"Really there is no gold here," said Penguin. "Let us give it up."

And shouldering their pickaxes they left the gallery.

Reaching the foot of the shaft they were much surprised at not finding the light

ladder which they used to ascend and descend the mine.

"This is some stupid joke of Dominique's," said Penguin; "he thinks he will make us work on till the evening."

with a forced laugh. "Be reasonable. We have worked for a whole week to please you. We have found nothing, and that is not our fault. I assure you there is no more gold here. Put down the ladder."

Madame Moreau? No? Ah, well! I will try and find the good lady, and I shall give her your compliments."

"You scoundrel!" said the Canadian, who at last understood the sailor's abominable scheme.

"What?" said the robber, as he took out his revolver and pointed it at Penguin. But, after a pause, he raised his arm, and,

"No," said he. "It will be better fun to leave you there. Ta, ta!"

And this time he disappeared for good and all. The poor lads heard him departing, and then the sound of his footsteps on the stones gradually died away. They were alone, without hope of assistance, at the bottom of a shaft ten yards deep!

Daniel, up to the last moment, had believed it to be all a joke, but when he at last understood into what a cruel trap the robber had drawn them, he sat down on the muddy ground and burst into tears. Penguin, pale and with clenched hands, remained bravely erect, seeking already, in his indomitable energy, the means of escaping from the shaft, where they were perhaps doomed to die of hunger.

"This time," cried Daniel, "we are lost. Why has Providence snatched us so many times from the hands of death to reserve us for a like fate at the last!"

"Have I not already told you," said the young Canadian, "that despair is cowardice, since it abases man, and leads him more surely to his destruction?"

"Ah! Martial! you are always lucky in feeling in your heart the confidence which sustains you and helps you out of your difficulties; and to think that it is I who have drawn you to your living grave. I am punished, because I am guilty. The last words of Bastien are ringing in my ears: *'In life mere good intentions are worth nothing; deeds alone count, and the wicked always receive their punishment.'* To come to this I first allowed myself to be persuaded by Dominique to violate the secret which had been confided to me, and now again I was deaf to your advice in listening to this scoundrel, who has doomed you and me to such frightful sufferings. Is it just that you, innocent as you are, should expiate the faults which I have committed? I would have given my gold, my life itself, to this man, if he would only have let you live. I am utterly miserable!" and the lad began to cry bitterly.

"Come, Daniel, cheer up," said his companion; "the punishment at all events seems out of proportion to the offence. The real criminals are those who, profiting by your inexperience and the generosity of your disposition, have led you astray. Expiation is for them alone, and we must get out of here to be their executioners."

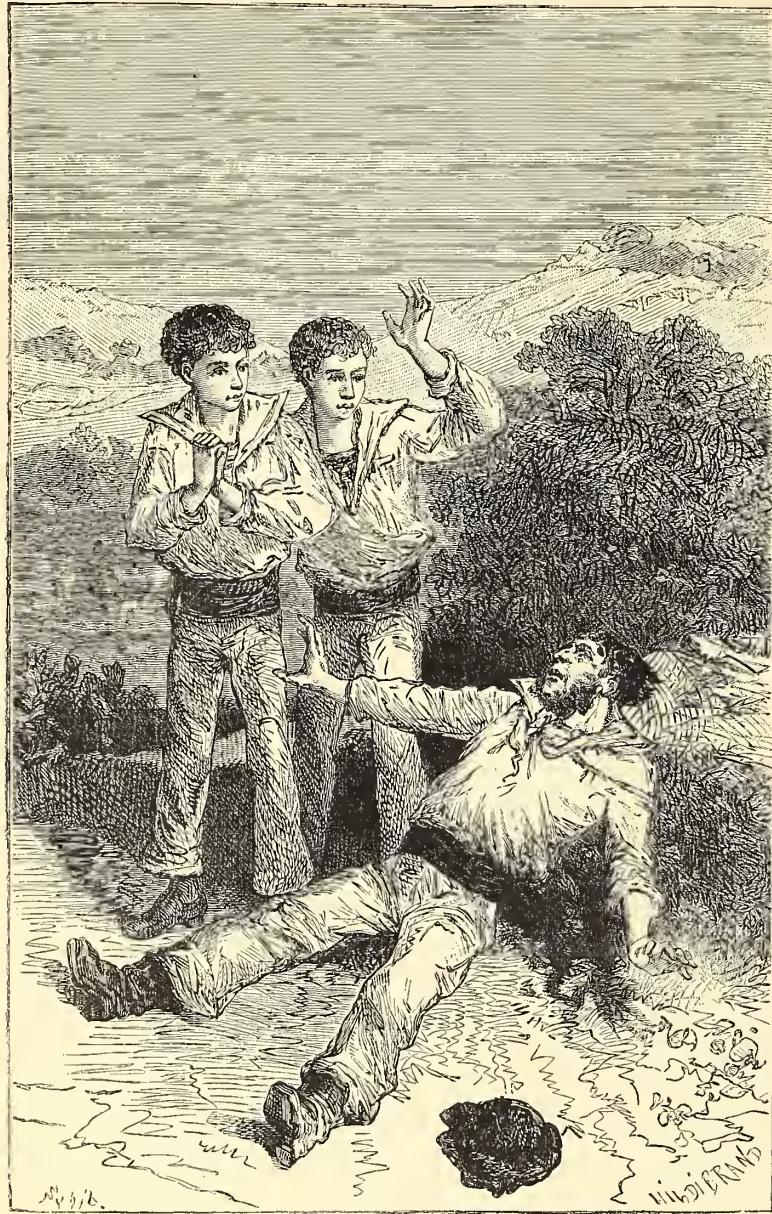
"Get out of here?" murmured Daniel. "Are you in hopes to cut your way through these walls of rock?"

"No. It would take too long to work a gallery through it; besides, our strength would give out. We must think of something else; so cheer up, man, and if death is to come, let us make a good fight first."

The young Frenchman seemed electrified by the gallant words, and rose immediately with,

"I am ready now, Martial. My tears are dried. Let us first try to detach some of the planks which form the backing in our gallery. By placing them across the shaft we may, perhaps, manage a scaffolding high enough to reach the top."

(To be continued.)



"He lives!" exclaimed Daniel.

"Anyhow, he is not going to do us out of our breakfast," said Daniel, and he called the sailor.

His shouts remained for some time without reply. The lads became impatient and yelled at the top of their voices. At last a shadow crossed the opening, and Dominique appeared on the edge of the shaft. His face looked so malignant and fierce that Daniel trembled.

"Hallo!" said he, roughly, "what are you doing down there making such a row?"

"Let us have no more of your witticisms," said the Canadian; "throw down the ladder. We want to come up."

"In the first place, Mr. Penguin," replied Dominique, ironically, "may I beg of you to be a little more polite towards me? You wish to come up, you say? I am not preventing you from doing so."

"Look here, Martigues," said Daniel,

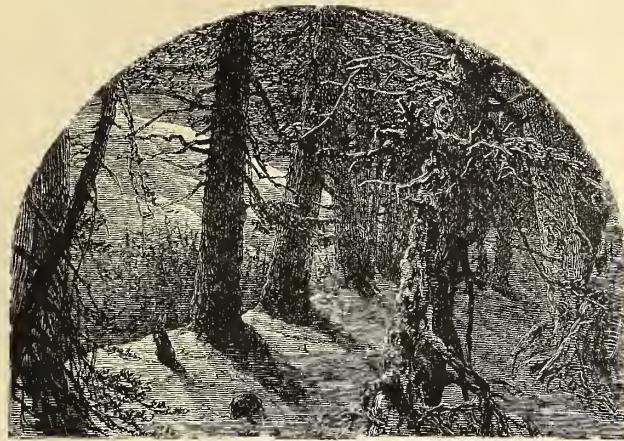
Dominique grinned.

"My dear little Daniel," continued he, "I am awfully sorry for your sake that you made such bad acquaintances on board the *Atlanta*; but as I can do nothing in the matter, I must leave you with your loving friend Penguin. I have just received an important letter which recalls me in all haste to Melbourne, and I really have no time to attend to you. However, you may reckon on my returning as soon as possible, just to see that you have not been too dull together during my absence. Whatever you do, don't quarrel! That is the style, isn't it? Good morning!" And the sailor pretended to move away.

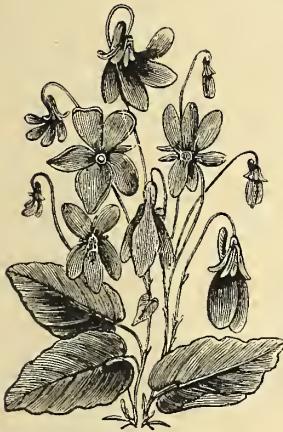
"Dominique! Martigues!" exclaimed the lads.

The rascal reappeared.

"Ah! I forgot," said he, laughing loudly. "Just have a look in your pocket-book. Perhaps you have the address of



MARCH VIOLETS.



Other sweetness, too, ye take,
Often kept for saddest sake—
Kept for soft'ning old regrets—

NAUTICUS IN SCOTLAND:

A TRICYCLE TOUR OF 2,446 MILES IN SIXTY-EIGHT DAYS.

BY THE AUTHOR OF "NAUTICUS ON HIS HOBBY-HORSE."

33rd Day.

Uig. Dunvegan. Sligachan.

CALLED at a quarter to seven. Blowing and raining; went to sleep again; fine at nine; got up.

Uig Bay is very sheltered; there is quite a little town round its shores, which gives it a cheerful appearance.

My intended room-mate breakfasted with me. He had a most peculiar high-pitched sing-song voice, but I soon came to the conclusion that he was a very well-informed and sensible fellow. Perhaps his high opinion of my late "feats," as he was good enough to call them, had something to do with this opinion.

Noon, started for Dunvegan. Returned on the Portree Road to the fourth milestone, then turned sharp to the right and ran round the

head of Loch Snizort, and through the village. A few trees hereabouts relieved the dreary monotony of the scene. From Snizort to Dunvegan the road, following the erratic outline of the coast, consisted of a series of sharp twists and turns. While traversing its undulations through a bleak moorland, the only signs of life that met my eye were a few miserable huts and an occasional forlorn-looking inn. These bothies were very roughly protected from the weather, some only by turf roofs, these being secured by the remains of nets or fibres weighted with stones. Many had no chimneys, and the smoke streaming through every crevice gave them the appearance of being on fire.

I stopped at Tayinlone Inn for something to eat. Visitors being unlooked for so early in the year, I had to make a second breakfast or an early tea, I don't know which to call it, on tea, eggs, and scones.

The landlord, who was building a boat for the coming season, told me, in answer to my questions, that the natives eked out their living by fishing and by making the most of their little crofts and their cows.

The islanders, in his opinion, had fallen off in physique since they had given up porridge for sugar and tea. He said that his inn did not

pay, except in the shooting season, when it was always full, in fact every room was already engaged.

Arrived at Dunvegan at 6.30. The only place between here and Snizort where I could possibly have gone wrong was at a point about three miles from this village, where several roads met; there I turned sharp to the left.

Having been informed both at Uig and at Tayinlone that the distance from Dunvegan to Sligachan was eleven miles, I had not hurried myself, intending to get in comfortably at about nine o'clock. On asking again at Dunvegan I was astounded to hear that the correct distance was twenty-four! This news put me in a dilemma. On the one hand the fine weather, the expectation of finding letters and of meeting T., made me wish to push on to Sligachan. On the other, the lateness of the hour, the need of refreshment, and twenty-four miles of unknown road to be done partly in the dark, caused me to hesitate.

At this moment a Yorkshireman, who was just going to have tea, invited me to take a seat at the table. I accepted his invitation, but on calling for my share of the bill I read the following:—

	s. d.
Tea	2 6
Washing hands .	0 6
Total for one tea .	3 0

I at once decided to move on.

7.30 p.m.—Left Dunvegan without seeing the castle. The road alternately rose and fell for eleven miles to Struan, the surface being excellent. It was a lovely evening, and the prospect of Loch Bracadale, with its islands and many promontories reflected in the still surface of the bay, had a very pleasing effect.

The red cliffs at the entrance—the highest in Skye—were very fine. I also had a good view of those singular flat-topped hills called McLeod's Tables; and I fancied I saw McLeod's Maidens; these are three pillar-rocks off the N.W. point of the bay. The sea, in breaking over them, leaves a vapour train, and it is commonly reported that the idea of flowing dresses was taken from this circumstance. I did not stop at Struan Inn, although I believe accommodation may be found there, but pushed on through Bracadale, and round an arm of the loch—this could be almost jumped by a pedestrian, but is a mile for the cyclist.

From the loch there was a very steep bit on to the spur of Ben Ghlas, from whence I had a most romantic view. Far beneath lay the placid water of Loch Harport, from the head of which the River Drynoch stole its way through the deep vale. Right ahead, dimly perceived in the twilight, the weird-like peaks of the Cuchillins shot up into the sky. Again I found myself on an Alpine road, with a cliff on one side and an unguarded drop of unknown depth on the other.

As it was almost dark I had to take every possible precaution. Fortunately the road was perfect, and as I ran slowly down, the baying of a dog in the depth below was the only sound that broke upon the still night air.

There were one or two very dangerous corners; these I dismounted to, and eventually got safely down to the level of the vale, where the road became heavy.

Darkness had now set in, but I managed to find my way along. In the deep gloom the-

various objects that I passed assumed all sorts of grotesque shapes and forms, causing me to think more about ghosts and bogies than I had ever done before.

Hurrah ! the lights of the hotel at last.

I had never enjoyed refreshment than I did at eleven o'clock that night at Sligachan.

Uig to Dunvegan ...	=	29
Dunvegan to Sligachan	=	24

Total run = 53

(To be continued.)



RUGBY FOOTBALL, AND HOW TO EXCEL IN IT.

BY DR. IRVINE, THE SCOTTISH CAPTAIN.

PART XVII.

I HAVE had repeated queries from correspondents in all parts of the country, on points which have sprung up in the course of their matches, and about which their minds are in doubt. Most of those queries show that the inquirers have not looked into the matter for themselves, and studied sufficiently the laws of the game; or, what is worse, that they have studied them more with a mind to start difficulties than to find a solution to the question which is perplexing them.

It has been said that no Act of Parliament can be so worded but that you can drive a coach and four through it. So it is with the laws of football. I have had a pretty long experience of the game, and of difficulties which may occur in deciding peculiar cases which turn up. And I will say that I have never failed to find a solution by a fair reading of the laws, if not in every case in their exact letter, at least in their spirit.

Without any disrespect to those gentlemen, I would remind them that the fault may not be in the rules, but in their perception. In my experience the best hands at ferreting out difficulties and weaknesses in the laws of the game are fourth or fifth-rate little provincial clubs, or pedantic pedagogues, who would argue the points of football as if they were points in metaphysics. As, for instance, I have heard a pedagogue argue till he was nearly black in the face that the old rule restricting handling the ball to the bounding ball covered picking up the ball rolling, be it never so slowly, because, forsooth, a spherical body moving on an uneven surface cannot be continuously applied to the surface, but must move by a succession of bounds, imperceptibly minute perhaps, but still bounds, and not true rolling.

This sort of preposterous reasoning is not uncommon, and is unworthy of a football-player. A man who cannot distinguish between a rolling

and a bounding ball may have a very subtle intellect, but it is thrown away on football, and should be kept for the law courts.

You will find that the longer you play, and the higher-class the games are in which you play, the doubts are fewer, and the inclination to pick holes diminishes. I do not say that the laws are immaculate; there are many points in which I would gladly see them altered. I shall not go into this matter, as there would be no end to it; but shall mention one proposed addition which is at present on the tapis—viz., to decide matches by points, in which touch-downs, tries, and goals, should have numerical values attached to them; and to institute penalties for violation of the laws, many of which can at present be violated with no more penalty than the yells of opponents, the howls of the crowd, and the stern calling back by the umpires; and in one or two cases not even by that.

Certain violations of the rules have a penalty attached to them. For example, a run where the runner got the ball off side is all in vain, and the runner is brought back. The same occurs where the ball is picked up dead. It is to a player's disadvantage to throw crooked out of touch. If he throws forward, his opponent may make his mark if he manages to catch the ball on the fly. If he neglects any of the formalities to be observed in taking the ball out for a kick at goal from a try, his opponents won't long leave him in doubt as to the penalty which attaches to that violation of the laws, and if he escapes without a concussion of the spine he is fortunate. But the case where the most irritating violation of all occurs, and where the law is most frequently and designedly broken, has no penalty whatever attached to it. That is the deliberate infringement of the law which orders that whenever the ball is called *down* it shall there and then—i.e. immediately—be put down and mauled.

There is nothing commoner than to see the man with the ball lie on it, and pretend he cannot get up, arguing eloquently, and all the while sitting on the ball till his comrades get up to take it from him. This is most commonly done by a back who is tackled by a body of opposing forwards charging down on his goal, and it is done on purpose to allow time for his forwards to get back to stop the rush, as he well knows that for him to put it down at once is to certainly lose a try, and gain a good slanging for letting himself be caught with the ball. The same trick is played by the defending back in another case, where he has tackled the ball in the grasp of one of a body of opponents who have come down upon him. The opponent calls down, well knowing that he has only to put it down promptly and carry on the rush, and one of his band are sure of the touch-down. But our back sees this too, and with shut eyes and grim visage sticks to the ball, deaf to entreaty and abuse alike, till his friends come up.

There is yet another dodge which is, I regret to hear, coming more and more into fashion—viz., in a maul near one goal-line, for the defending forwards to systematically fall on the ball, and lie there, getting up slowly and promptly falling again, and this repeated time after time till something turns up to give relief, either in the way of a back getting off, or the ball going behind, or the funky forwards plucking up enough courage to pull themselves together and make a last struggle for freedom.

Now all this is obstruction pure and simple, as bad as the obstruction practised by the Home Rulers—ay, worse, because their obstruction is only a straining of parliamentary law and usage, whereas this is a direct defiance of football law and usage. How is it to be penalised? I would suggest, Give the opposite side a free kick at the point at which the violation took place. This would be a very serious penalty, because the thing usually takes place near goal, and these free kicks would be dangerous to the defenders.

As regards counting by points, I should most strenuously oppose that; it would be violating what we take to be one of the first principles of Rugby football—that a goal is the point to be

aimed at. If you make it possible for a certain number of touches behind to equal a goal—or worse, for one more than that number to defeat a goal—you put a premium on long-kicking at the goal-line, to the discouragement of accurate kicking at goals and running tries. It may be argued that the present system, giving a free kick at twenty-five yards to the side touching down, is absurd, giving a positive advantage to the side being pressed, and that this should be balanced by counting it a point against the side touching down. I admit the premises, but I deny the conclusion. It is absurd, but the remedy is to make touching-down carry with it a certain disadvantage. Alter the laws and make the touching-down side kick out from their goal-line, and thus you would give the attacking side the benefit of the advantage they have gained, but that advantage, however often repeated, could never come to equal, far less to override, a goal.

One word more on the subject of the laws. The laws relating to tries, and the try itself, might with great advantage be simplified by being abolished altogether. The try, with its in-goal and touch-in-goal, its making your mark and taking the ball out to place it, and all its other intricacies, seems a cumbersome and mixed-up sort of mode of getting a goal, and, as a wind-up suggestion—and a radical one, I admit it to be—I would say, abolish the try and all connected with it; abolish in-goal and all that relates to that, and simply apply the ordinary rule of touch to the goal-line as well—viz., that the ball be thrown out at right angles to the line at the spot where it crossed it. This would bring about what *many* of us, at any rate, would rejoice to see—that a goal would be the only point of Rugby football, and a goal could only be kicked from the field of play. It would do away with all that bad style of play which so often takes place close to the goal-line, disputed tries, and crowds falling on the ball over the line, lying on the ball outside the line by funky defenders, running back with the ball behind one's own goal-line, and touching-down, with all the obloquy thereby incurred, the unjust and absurd kick-off from the twenty-five yards—all would be swept away, and much fine and new strategy would be developed, while kicking at goal would be immensely encouraged, for the very good reason that there would be no other way of scoring.

But while the rules are what they are, my advice is to abide loyally by them, and do not study them with a view to find wordings out of which you can extract a verbal quibble. As they stand, they provide you with a game which you will love more the more you play it, and which you will not be able to find it in your heart to criticise until, as in the case of the writer, enforced abstention from active service allows your ardour, to a certain extent, to cool, and yourselves to take a more judicial if less enthusiastic view of the matter.

There is no outdoor sport about which there is so much solicitude evinced by parents, guardians, and schoolmasters, for the safety of their charges, as football. Somehow it has got a bad name, and a large section of the public are never done condemning it. It is brutal, it is coarse, it is unscientific. Why all this abuse? It is utterly unfair. Probably the whole thing is due to the one feature of the Rugby game which had an appearance at least of roughness, and which is now abolished—viz., hacking. The popular idea of football with hacking conjures up a lot of savages, with heavy clogs shod with iron, and whose sole pastime consists in kicking each other's shins, while stretchers are in waiting to carry the killed and wounded off the field, and the player is fortunate who escapes with a week on crutches and a blue eye.

Those of us who played in the hacking days know how unlike the truth such a picture is, and some may be forgiven if they think that when football lost hacking it lost a great charm. Be that as it may, there is no hacking now, and I may assert with confidence, that there is no more danger in football, well played, than there is in any other of our outdoor sports. I question whether there is so much as in some others



JONES.—You can make liquid glue by dissolving small pieces of ordinary carpenter's glue in brandy, whisky, gin, or methylated spirits. If it sets, a very slight warming will make it liquid again.

T. M.—It was Ctesibius who, in the second century, made the clepsydra with wheels and dials, showing the hours, days, months, and signs of the zodiac, which has been confused with our modern clocks. It was Hooke who invented the anchor pallets, and thus allowed long pendulums to be used.

E. O. C.—Lord Nelson was married to Mrs. Nisbet on 11th March, 1787; and Prince William Henry gave away the bride.

A SUBSCRIBER FROM THE FIRST.—Answered several times before. Sir Julius Vogel's "Official Handbook to New Zealand," now published by Wyman and Sons.

R. F. YOUNG.—Highlands is pronounced as spelt in classical English.

J. H. SHAW.—You must be a very careless reader, or you would see that the headline of your certificate is the same as that of the magazine. This is THE BOY'S OWN PAPER, and not "The Boys' Own Paper," and we have no intention of complying with your request.

FRID.—The statement is correct; the great canon is in places over 5,400 feet deep.

L. R. W.—Pontoon are large flat-bottomed boats, used in the formation of bridges for military purposes. Sometimes they are made of canvas stretched on wooden frames, sometimes they are metal cylinders. They vary in size, but are generally twenty feet long by four or five wide, and two and a half deep.

ZERO.—We never said that the Ordnance maps were infallible. What we say is that they are the best in the market. Do you think it likely that any of our map publishers would be at the expense of specially surveying every acre of the United Kingdom for the purpose of issuing a shilling map?

N. P. R.—Light is invisible. Line a three-inch foot cylinder with black velvet, and stop one end. Make two holes opposite to one another two-thirds of the way down, and between these have a third hole. Hold the cylinder so that the sun shall shine through one of the holes and out at the other, and look down the tube. You will see nothing; but if you put a piece of paper through the third hole and into the course of the ray, the whole interior will be illuminated, owing to the reflection of the light from the introduced paper.

L. V.—To clean tarnished silver, make a saturated solution of hypo-sulphite of soda, and rub the articles with a rag or brush dipped into it.

VEXATA QUESTIO.—1. The grammar schools received their name at a time when the grammar of the English language was not written (think of that, ye tortured millions!), and when the principles of language could only be obtained through a study of the grammar of the ancient tongues, particularly Latin. Our so-called "grammar schools" were thus practically "Latin grammar schools," and hence the undue prominence still given to the dead languages in such establishments—a prominence necessitated by a state of affairs which no longer exists. 2. The postal system of the States is much the same as that of our Colonies. In thinly-populated places the letters, instead of being delivered, are "left till called for."

R. BOWSHER.—1. For maps of England, apply to Mr. Stanford, of Charing Cross; or of Messrs. A. and K. Johnston, of Paternoster Buildings. 2. Work hard and continuously, and you will succeed; but if you abandon any subject, let it be higher mathematics. 3. All right in every sense.

H. L. WATTS says that he makes his chromograph, centograph, hectograph, multigraph, or anyothergraph, out of a pound of glycerine, six ounces of water, and two ounces of gelatine; and that when this has been cooked for three-quarters of an hour over a slow fire, and set in the tin, it works as well as any other mixture, and has the advantage of being cheap and non-poisonous.

THERES.—It is quite true that any respectable bookseller can, if he chooses, get any book for you that is not out of print. The English catalogue contains a list of all books registered at Stationers' Hall, with their authors' names, publishers' names, and selling prices.

A SCOTTISH EXILE.—We know of no magazine devoted to poetry. We do not take amateur contributions.

J. L. and R. W. C.—St. Andrews was begun in 1159. It was finished and consecrated in 1318.

PATER.—Apply direct to the Admiralty. They will put you on the right track.

CURLEW.—Try Stanford, of Charing Cross, for maps of all sorts.

F. TIPPING.—The "Chemical News," or "Nature," or perhaps "Knowledge." Write to the editor of the latter with your query, or to the professor.

CECIL LEIGH.—It is odd, "The Boy who could not Whistle" would make a good fairy tale. Never mind, Leigh, it is of no consequence. You may "pay too dearly for your whistle" if you are not careful.

THUNDERBUS.—1. "Dolicho" means long, and "brachy" short, and "cephalic" headed, and you get long-headed and short-headed, or dolichocephalic and brachycephalic. 2. No. 3. Exactly; but we never said or intended that it included autographs of all the scientific men of the past and present. Is Dr. Whewell's the only name that is absent? 4. The address of the Peace Society is at 47, New Broad Street, and you can get full information by applying to the secretary.

A SCOT.—James VI. of Scotland was not present at the death of Queen Elizabeth.

SPECIAL NOTICE.

The following striking new stories, by writers already well known to our readers, will commence forthwith in our columns. Illustrated articles on "Fowls," "Fishing," etc., are also now ready. Will readers kindly make this known as widely as possible; as the present is of course a most favourable time for new subscribers to begin.

"Puck to the Rescue: a Story of City Life." By FAIRLEIGH OWEN, author of "Was he a Coward?" etc. (With Illustrations by ALFRED PEARSE.) Begins next week.

"Siquid the Viking: a Story of Adventure by Land and Sea." By PAUL BLAKE, author of "The New Boy," etc., etc. (Profusely Illustrated.)

"All by Himself: a Story of the Highlands." By ASCOTT R. HOPE, author of "The Amateur Dominie," etc., etc. (With Illustrations by GORDON BROWNE.)

"Through Fire and Through Water: a Story of Adventure and Peril." By the Rev. T. S. MILLINGTON, M.A., author of "Some of Our Fellows," etc., etc. (With Illustrations by WELLS and STANGLAND.)

Correspondence.

A READER (or perhaps A READER).—The Royal Yacht Squadron flies the white ensign, and has a burgee with a crown in the centre of a red St. George's Cross on a white field. The Royal Cork, Royal St. George, Royal Victoria, Royal Yorkshire, Royal Alfred, Royal Dart, Royal Rothesay, and Royal Portsmouth Yacht Clubs fly the red ensign; all other yacht clubs bearing the prefix of "Royal" fly the blue ensign, some with and some without the club badge, as shown on the burgee. The white ensign is, with the exception of the Yacht Squadron, borne exclusively by the Royal Navy; the blue ensign is the flag of the Royal Naval Reserve, and the red ensign that of the Merchant Service.

G. A. K.—You will never learn to make a satisfactory picture unless you give more attention to drawing. Get the form right first, then the colour. We have seen drawings by lads half your age that were better than yours. However, persevere.

VERDANT GREEN.—If there was any irregularity on the trial, or any different evidence, the man can be tried again. Judas Iscariot is said to have had red hair; but this is merely tradition.

E. T. ELKINGTON.—The notes of musical glasses are varied by filling them up to different heights with water. We never heard them called "harfonicans" before. Look at your dictionary.

ZANNEZ.—1. Francis Francis's "A Book on Angling," fifteen shillings (Longmans, Paternoster Row); and J. H. Keene's "The Practical Fisherman," half-a-guinea (Gill, 170, Strand). 2. The real estate goes to the son unless the father made a will. The other is divided.

R. T.—The articles on Model Steam-Engines commenced in No. 136. "How to Make a Pin-Organ" was in No. 54; and "Pupa Digging" began in No. 90.

RUPERT R. SANDILANDS.—For information concerning fretwork patterns, see our No. 140; or apply to Messrs. Bemrose and Sons, Old Bailey, E.C.

C. E. T. R.—Perhaps you do not put it on properly. When you French-polish you should fold a piece of flannel into a cushion, and wet it well with the polish; then lay a piece of clean linen rag on the flannel, and apply a drop of linseed-oil to it, and rub away in a circular direction, commencing very lightly, and finishing with naphtha applied in the same way as the polish. See back numbers for ingredients.

The Illuminator.



The existence of good feeling on the part of the French Nation for the people of this country is shown by the presentation of a colossal bronze figure of Freedom holding aloft the torch of Liberty. Beauty, with usefulness, is combined in this immense work of art, as the bright, blazing torch will serve the purpose of a beacon light in the harbor of New York. There is another figure which will challenge larger praise and admiration than even the great work above referred to. It is illustrated here.

With, and represents the aged and worthy St. JACOB, holding aloft in his hand that beacon which will guide aright all sailing upon the sea of life, whose waters abound with the shoals and dangerous places of sickness and disease. The light it casts is designed to show that St. JACOB'S OIL is the true and trusted means of keeping the body on its proper course, and of easing and "righting" it should it be unfortunately cast upon the shoals of rheumatism or other painful ailments. Thousands of grateful ones throughout the world have proved the value and felt the good of this Great German Remedy, and are glad to recommend it to all needing the services of just such a remedy. In this connection Mr. John S. Briggs, a well known citizen of Omaha, Neb., told a newspaper man that he was terribly afflicted with an acute attack of rheumatism in his back. The disease, which had been preying upon him for years had drawn him out of shape. He resorted to every remedy known to physicians, but found no relief until he tried St. JACOB'S OIL, one bottle of which effected a complete and radical cure. Another case may justify reference:

A VETERAN SEAMAN'S TROUBLE.

Editor Inter-Ocean, Chicago, Ill.: I send you this, feeling that the information conveyed will be of material benefit to many of your readers. One of our oldest citizens, Captain C. W. Boynton, the Government Light-house keeper at this point, is probably one of the oldest seamen in America, having sailed twenty-six years on salt water. After this forty-six years' service his eyesight failed him and he kept the Light at Chicago until the Government built the Gross Point Light here, when he was transferred. While seated in my store this morning the Captain volunteered the following written statement: "This is to certify that I have been afflicted with rheumatism for twenty (20) years, both in my side and limbs. I am happy to say that, after using less than two bottles of the ST. JACOB'S OIL, I am entirely free from pain, though still limping somewhat when walking, from long force of habit. C. W. BOYNTON." Referring to the foregoing facts, I might allude to numerous similar cases that have come to my notice, but "a word to the wise is sufficient."

JOHN GOEBEL, Pharmacist, Evanston, Ill.

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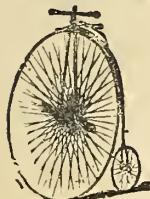
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I will send to any reader of this Magazine a Coin Silver Hunting or double cased Watch, lever movement, full jewelled, thoroughly tested and regulated, with a gold-plated Albert chain and charm attachment, who sends me within the next Sixty Days \$10 or instructions to send C.O.D.

WARRANTED.

No. 2.

I will send a Lady's Hunting-cased Gold Watch, full jewelled, thoroughly regulated and tested, to any person who sends me \$21 within Sixty Days, or C.O.D. This watch is sold at \$25 in other stores.

WARRANTED.

I have also a large stock of every description of

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Please examine our Price List, select your number, send on your order, with Post Office Money Order enclosed—which only costs two cents up to \$4; or if sent C. O. D. will cost 25c. collection.

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NO.	CANISTER.	NO.	CANISTER.	NO.	CANISTER.
1. Nankin Young Hyson5 lbs., \$1.50	18. Superior Natural Leaf Japan	5 lbs., \$1.50	35. Ex. Fine Breakfast Souchong	5 lbs., \$3.50
2. Fine Moyune "	.....5 lbs., 2.00	19. Fine Cultivated "	5 lbs., 2.00	36. Finest Assam	5 lbs., 4.00
3. Superior "	.....5 lbs., 2.50	20. Superior "	5 lbs., 2.50	37. Fine Oolong	5 lbs., 2.00
4. Extra Fine "5 lbs., 3.00	21. Extra Fine "	5 lbs., 3.00	38. Superior Oolong	5 lbs., 2.50
5. Curious "6 lbs., 4.20	22. Finest Imported "	5 lbs., 8.50	39. Extra Fine "	5 lbs., 3.00
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7. Fine Moyune Old Hyson	5 lbs., 2.00	24. Extra Fine "	5 lbs., 3.00	41. Fine Mandarin Mixture	5 lbs., 1.50
8. Superior "	5 lbs., 2.50	25. Finest " "	5 lbs., 3.50	42. Superior "	5 lbs., 2.00
9. Extra Fine "	.....5 lbs., 3.00	26. Fine Breakfast Congou	.....5 lbs., 1.50	43. Extra "	5 lbs., 2.50
10. Curious "	.....5 lbs., 3.50	27. Superior Kaisow	.....5 lbs., 2.00	44. Ex. Fine "	5 lbs., 3.00
11. Superior Gunpowder	.....5 lbs., 2.50	28. Extra "	.....5 lbs., 2.50	45. Finest Imported "	5 lbs., 3.50
12. Extra Fine "	.....5 lbs., 3.00	29. Extra Fine "	.....5 lbs., 3.00	46. Fine Houqua's Mixture	5 lbs., 1.50
13. Extra Curious "	.....6 lbs., 4.20	30. Finest Imported "	.....5 lbs., 3.50	47. Superior "	5 lbs., 2.00
14. Finest Imported "	.....6 lbs., 4.80	31. Finest " Breakfast Congou	5 lbs., 4.00	48. Extra "	5 lbs., 2.50
15. Superior Imperial	.....5 lbs., 2.50	32. Fine Breakfast Souchong	.....5 lbs., 2.00	49. Choice "	5 lbs., 3.00
16. Extra Moyune Imperial	.....5 lbs., 3.00	33. Superior "	.....5 lbs., 2.50	50. Choice upon Choice Houqua's	Mixture, which has no equal, 5 lbs., 3.50
17. Very Superior "	.....5 lbs., 3.50	34. Extra "	.....5 lbs., 3.00		

N.B.—Beware of parties representing themselves as Agents for our Teas, as we neither employ Agents nor Pedlars, thereby giving our patrons the benefit of their commission.

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~~Be kind enough to show this list to your friends, and also preserve for future reference.~~

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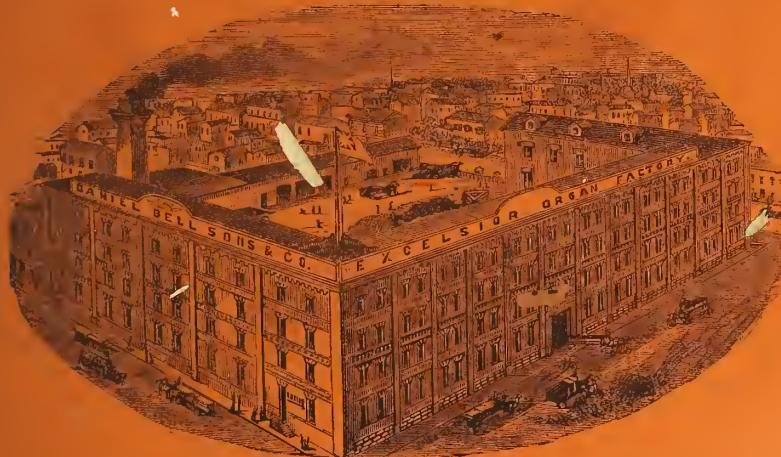
~~We specially recommend the following Teas as extra value: GREENS, Nos. 3, 4, 5, 13; BLACKS, Nos. 28, 29, 30; JAPANS, Nos. 20, 21, 22; MIXED, Nos. 48, 49, 50.~~

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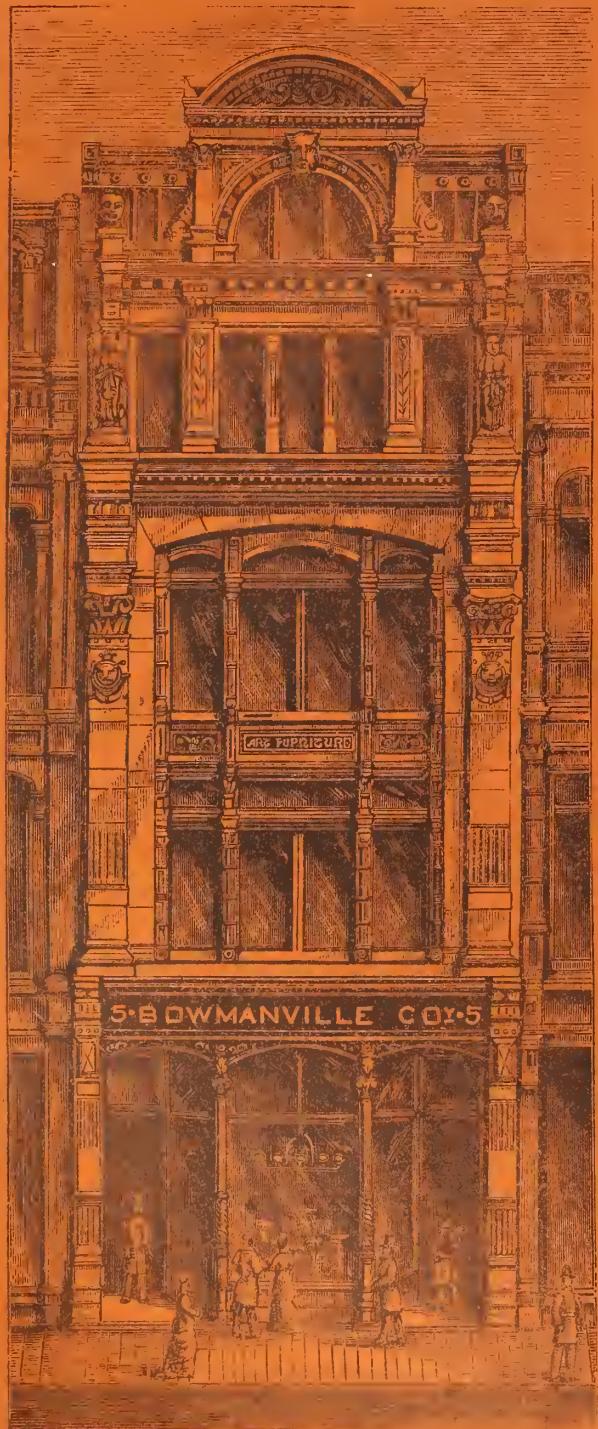
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